

THE PATH THROUGH PENGUIN CITY

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This book is dedicated mainly to all those creatures of the wild, the human ones too, who have worked so hard, suffered so much, and so often died, in providing the material that may perhaps inspire others to come along too in the battles ahead.

Preface

It is just pure presumption on my part that I have not objected to my name appearing here as author. This is not really my book at all. It is the work of all the other animals who suggested nearly everything, made the photographs possible, and drew the other pictures by showing me how to make the marks in the right places. I just filled in other bits here and there. But if anyone feels that any part of it is unfair to him, then I take all the blame and I am sorry.

The pieces have been assembled in various lands and circumstances over the last five years, then worked up partly at the old home on the banks of the Tay in Scotland from where last century so many whaling and sealing vessels had gone out on voyages that were often hard going on humans and always harder on the other animals. The old typewriter continued on the far isle of Foula in the Shetlands, once the home of the Sea eagle, and where the Allan skuas now provided a background with their cat cries as they skirmished over the heather, and the seals sang their storm songs at the foot of the mighty cliffs. Then it was at the Manse on the island of Papa Stour beside the Shetland mainland, the home of Mr. and Mrs. James Isbister, a haven of peace while the wind so often howled outside in an atmosphere of peat reek.

Periodically through it all, Professor A. D. Peacock with his staff of the Zoology Department in University College, Dundee, allowed me to drop anchor in the midst of their busy life, where the whales and seals were ever given kindly assistance in the working out of their many problems. The Universities Federation for Animal Welfare in London

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came in with help immediately on my return from the Antarctic.

But it is difficult to know where to begin and end in the expression of gratitude to those who have done so much in the work. Everywhere I have gone, at home in the cities, in far off seas and lands, I have had the greatest co-operation. From whaling gunners and crews, the sealers, the fur trappers; everyone on such a vast stage who knew of the efforts being made to alter conditions and help the creatures involved. They nearly all realised that benefit to one animal would benefit everyone, and the merest suggestion of resentment was very rare indeed.

I am indebted in particular to Sir Vyvyan Board of Hector Whaling Limited for his great response and driving power. Leading the team he got together from General Electric and its associates, Westley Richards, and others, in co-operation with those of his own Company, he made an ideal become reality. Had he seen this book script in its final form he would have insisted on his own name being erased; so after valuable suggestions from him earlier, he saw it no more.

I shall not forget the happy comradeship I had with Captain Begg and all his men on the maiden voyage of factory ship *Southern Harvester* and her fleet of catching vessels. Her owners Chr. Salvesen and Company put up with the buzzing of the many wild bees in my bonnet with tolerance.

Many adventures I have had under the flag of Canadian Pacific Steamships Ltd., a company for which I shall always have great respect indeed. The kindness of the General Manager the late Captain R. N. Stuart V.C. in Liverpool, and the General Superintendent Captain W. L. Heeley in Montreal made my first journeyings to the Land of the Bald Eagle possible at very short notice.

The British Naval Weather Service kindly briefed me on weather and ice reporting before the Antarctic voyage. The Admiralty Hydrographic Department, the Falkland Islands

PREFACE

Dependencies Scientific Bureau, and the Research Department of the Foreign Office, have given every help in the bringing up to date of the Antarctic charts from which the maps were made, incorporating the recent work of the South Georgia Survey 1951-2 led by Duncan Carse. The Staffs of the British Museum of Natural History, the Ministry of Agriculture and Fisheries, the International Whaling Commission and the National Institute of Oceanography have never been too busy to help to settle points about our whales or penguins; and Miss Dorothy Adamson of Dundee, in ploughing through much of the script, corrected so many of the wanderings of my pen. There were many kind people who supplied sustaining cups of tea as we all went along, and more sustaining encouragement.

I am grateful to Mrs. George Bambridge and her publishers Macmillan and Company who have kindly allowed me to quote from her Father's *Just So Stories* and *The Jungle Book*; and to Mrs. James Elroy Flecker and publishers William Heinemann for the reproduction of the lines from *Hassan*.

Whale and Seal and the Penguin people and their friends do not at all like their very scientific Latin names, so these have been added only where there would otherwise be possible confusion in cases where more than one common name has been applied by usage to the same person. They want me to thank everyone for them too.

In laying this book humbly on the mat with a tentative wag of all that evolution has left of what was once a tail, it is to every boy and girl no matter of what age in mere years that we would appeal; that each one of us may come to make it a concern of our very own, whether or not the human animal can by its behaviour justify being included any longer in Nature's plans for the Universe.

'THE AUTHOR'

Dundee 1954

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How the Path Began



HASSAN: And what of that to you or me, your Golden Journey to Samarkand?

ISHAQ: I am leaving this city of slaves, . . . I have broken my lute and will write no more qasidahs in praise of the generosity of kings. I will try the barren road and listen for the voice of the emptiness of earth. And you shall walk beside me.

J. Z. FLECKER: *Hassan*

How the Path Began

Is it the right thing that still another book should be written, especially in days when so much paper is in demand for so many things? So many of those who have heard the story of *Whale*, and *Penguin*, and the others, have said—This must all be written, so much depends on it.—And others who have read part of it have said—It is no use, in an age of increasing fear, you cannot be so outspoken; people don't want to hear these things.—But so often in past years, I have found that when I have lacked courage myself, I have been invariably my own worst enemy and found how very true it is that the only thing to be afraid of in this life is fear. So perhaps after all, this story may be justified, and in a world wherein the animal man is cruelly destroying everything around him at a tragic rate, I would humbly apologise only to the trees, sacrificed that the paper might be forthcoming; explaining to them that I ask their help genuinely in the hope that other life may be saved.

Our world wars of this century, the fighting and bickering going on now, and the threat of more and more to come, are fundamentally biological in origin. The eternal problem of a destructive animal species becoming so overcrowded that its members have become unfriendly in a fight for living room. And as the years roll on, may those of us still able to stagger to our feet, encompassed more and more by the hell to which the ambitions of men can lead, come bit by bit to realise it is better to live, not as men have done in the past, but with humility as the other animals do.

We discussed many things that last time, in the desert, in the air, and in little boats and rafts on the oceans after

the torpedoes had struck, and afterwards in the Arctic and Antarctic wastes. So, in the story, where the conversations are controversial, I have altered a little the names of those who took part, and if then a name fits any particular man, perhaps a brother of the one involved, I hope it is not resented.

A man has sooner rather than later to make a big choice in life. Either he concentrates on making money, seeing little of his family, and having 'success' stamped across his epitaph; or he puts money in the background, or anywhere other than where it will obstruct his vision, and aims to get the most out of life. He surely cannot do both.

This book is partly in tribute to that happy band of not too scientifically minded biologists who wander amongst the tribulations of this world, but who never grow old in the process, because like so many of Nature's children they have a kindly regard for each other and all the creatures that share the world with us. Creatures from the tiniest insect with its own problems in life, to the great whales, all of which man in his eternal selfishness seeks so often to destroy.

It is better to wander, for only away from the beaten track can you hear clearly and obey the voice of Creation. And as we stray from the main pathway, others ahead of us have done the same and we may come on the footprints of Edward Wilson of the Antarctic, Grey Owl quietly watching over the Beaver People, or Axel Munthe meditating on his way to San Michele. Until we come to a clearing at the very edge of the forest just as the full moon has risen from behind a rocky knoll on which a figure stands silhouetted. In the clearing are many other figures seated in a circle in quiet conference. I can recognise a Mr. Milne with Mr. Tenniel beside him, and Mr. Carroll is listening while his friend Mr. Shepard is in serious conversation with a young lady called Alice as she sits on the ground admiring the now moonlit tummy of a very young and yet very old philosopher Bear friend called Winnie-the-Pooh. The tummy is very

much in evidence as its owner leans back against the door post of a burrow belonging to one of the local Rabbit People while he looks dreamily at the figure on the knoll.—And a closer inspection of the knoll reveals the figure to be a little Penguin.

In spite of what I remember my birth certificate once said, I think I must have been born somewhere 'ahent a dyke' as the Scottish description of the event goes, and then slept in a rabbit burrow, with permission from the owner, until too big to get in. Since then it has sometimes been a bed in the woods of the Scottish Highlands, or the lands of Africa, or on deck at sea under the stars, and there was the feeling of being at home and at peace. In the cities of men there have been times when there was no money for hotels, and the woods were far away. I have tried a newspaper groundsheet and dozed beside Peter Pan in London's Kensington Gardens, only to be told by an apologetic park warden that it wasn't done. And once when dollars were scarce it was the Central Park of New York. But these were too near the ceaseless horror of city traffic to bring peace. Gutting fish on the deck of a North Sea trawler in the small hours of a February morning was wet and cold, but more kindly on the nervous system.

And now I have just returned from the great Canadian Wilderness sleeping in below-zero temperatures, occasionally with just an old worn canvas windbreak that did for a tent, and in my sleeping bag beside the sledge dogs. All of us were tired out and we slipped into oblivion to the lullaby of the silences. Close around our shelter, the Timber wolves, those fellow spirits of the wild, left their pad marks for us to see as the dawn came up. How often these creatures are maligned by film producers, boys' story writers, and so called sportsmen alike. Wild animals?—I have not yet met any, and so far it would seem that only in the cities and haunts of men need you be much concerned about self defence.

I have had great times as a civil engineer, when in Scotland we burrowed like mechanical rabbits through a shoulder of Ben Nevis, but never could understand how the moles ran their little tunnels exactly to where they wanted to go without theodolites and triangulations. When we thought we knew something about constructing dams, the beaver in Canada made us humble again. I had seen the world through the eyes of an engineer and thought our great structures were wonderful. Since then, on various expeditions, and work on the preservation of wild life and Nature's resources generally, I began to doubt, then knew for a certainty that while in many places we helped the desert to blossom, yet so many of our schemes were looting Nature's house for a temporary material gain. We had surely a duty far beyond efficiency at the drawing board. Destruction of natural resources was perhaps millions of times greater than anything saved in the careful design of works. Our Charter as Civil Engineers was formulated as—the art of directing the Great Sources of Power in Nature for the use and convenience of man. Was this right? Without additional qualifying words, the spirit of it could be so easily abused by economic opportunism. Did we really take the trouble to study Nature and the whole balance of life on which our existence depended? At the same time as we tried to direct her, was it not our duty to direct these fellow men to fit in with Nature? Of what avail was skilled engineering design when civilisation itself was being allowed to totter as a structure before our eyes? But there were those who did not laugh at such musings, and a far seeing Council of the Institution of Civil Engineers in London was giving it all serious thought.

So often we hear it said, as though it was a plausible achievement, that somehow as a nation we muddle through. Nature has a habit of dealing pretty severely in the end with any animal that muddles.

And returning to Scotland I wondered as more hydro-electric schemes were taking shape, with much of the catchment areas of bare, treeless hills. Was it not a matter of urgency in many lands that we co-operate more with the Forestry people, that wherever possible these areas be again clothed with a blanket of trees that would assist in control of the rainfall, rather than we should have to build equipment to handle flood waters that need not occur?

A conference with Doctor Wilfred Grenfell of Labrador, who wanted the land of his work planned for an air ambulance service, ended in my realising that some time in that country might involve an engineer having to do an emergency appendix operation or an occasional amputation. So I returned to my old University of St. Andrews, the University College in Dundee, to pick the brains of the long-suffering medical men. Those were days of world depression, and it ended in my staying on to graduate. But in medicine the story has been the same, the emphasis on quantity rather than quality, an animal despoiling its own means of survival. Could it be now that Nature, weary of it all, is going to let our too highly specialised atomic thinking brains accomplish the removal of much of this menacing civilisation?

It was T. E. Lawrence of Arabia who said at one period of his time in the desert: 'Madness was very near, as I believe it would be near for the man who could see things through the veils at once of two customs, two educations, and two environments'—Lawrence, who now looks as though going the way of my friend Grey Owl and so many others, in arousing outspoken criticism only when no longer able to reply. Now, having been bound up with the attitude of man in so many parts of the world; seen his vicious cruelties to defenceless creatures, including evil actions toward his own kind; and particularly his greedy destruction of the resources Nature has provided, I have at times come close to Lawrence. Badly conducted, almost sadistic

experiments that I have known in more than one country performed behind a façade of science; cruelties, from the slow death of little wilderness creatures on the altar of the fur trade, to that other symbol of man's callousness the explosive harpoon in whaling: these have given me nights when sleep was impossible in trying to solve the urgent question—what must I *do* about it?

Nature is not generally cruel. The 'red in tooth and claw' picture is untrue, although exceptional cases are apparent. And as a rule only animals like our domestic cats and dogs ever learn destructive habits of killing in excess of their needs, through their contact with men. Even our poor persecuted fox so often earns the chickens and game he may occasionally enjoy by his control of damaging rodents. But the human animal is the only one which really goes in for blood baths and torture for just the so-called fun of it.

And this man is spreading over the whole earth at the frightening rate of two million net increase every month. Will he be able to control his reproduction before his surroundings are destroyed beyond recovery and he sinks amid the mess? In that word 'technology' has been included yet another branch of science, which it has been prophesied will solve all the food problems of increasing population by utilising the contents of the oceans and harnessing the natural process of photosynthesis. But it is not the food that is the problem so much as the tragic increasing destructiveness of this animal that we are breeding. For all humans who have not adapted themselves once more to life in the sea, and this time in the real depths, it is going to need the synthesis of moral fibre as well as material fibre to ensure continued existence. Man has graduated from throwing stones to throwing hydrogen bombs, but Nature, benevolent always, may force him to control his numbers in a less violent way, by sterilising him through his widespread use of radio-activity; his indirect exposure to cosmic rays having given him little immunity.

The great dinosaurs had a career of a hundred million years. Man has had a mere five million and looks like being already on the way out. But it is up to himself. The word 'extinction' has come more and more to the fore in recent years as our destruction of our habitat has all too slowly begun to sound the alarm gongs. But to be guilty of unnecessary cruelty is surely far worse than to die of starvation. Sad it is that rarely ever is anything done about cruelty by those responsible, until being kinder proves to be economically attractive. That is part of the meanness of us as a species.

* * * * *

This book may perhaps be described as the story of just the start of a life adventure which began vaguely, where it had been a case of drifting along through the years; until at length a purposeful scheme seemed to evolve through no doing of my own. As in a car travelling a twisting country lane in the darkness, the headlights suddenly revealed the main road ahead, and the Antarctic whaling unfolded, with the hospitality of the little people of Penguin City: which became to me a parable, partly awake and partly dreaming as I may have been. The possible remaining years of life seem all too few to accomplish a fraction of what now cries out to be done.

The battle has carried me to Canada, to the tragedy of the fur-trapping, made possible by thoughtlessness and selfish vanity; to the callous methods of some of those in the Australian livestock industry, and the slaughterhouses in other countries, that nobody buying their meat ever questioned; on to the Pacific bordering on Alaska, where whales floundered their lives out in agony as in the Antarctic; and back to the Harp seals that died in my arms far out on the pack ice off Labrador, mutilated by sealers' bullets.

Then by the summer of 1949 it was into the United

States of America, to Lake Success and the meetings of the United Nations' Educational, Scientific and Cultural Organisation, where the reports from all over the world were of man's partly ignorant, partly wilful destruction of the earth's resources; the animals, the trees and the soil itself. It made pathetic hearing. Mary Webb has described it so perfectly as the brainless egoism of a small boy pulling off flies' wings. And my friend Alice Morgan Wright, as representative of a humane society in America, went home after the conference and wrote:

'That giant child the United Nations, though growing in grace and wisdom, still takes hold of things by the wrong handles, one of its earnest but fumbling efforts being the Declaration of Human Rights; for in this we humans have asked everything we could think of for ourselves, but nothing for those undemanding comrades who share with us our habitations and our burdens throughout the world. . . . Their rights should be declared no less urgently than our own.'—And her final words: 'After listening for three weeks to those papers, and learning how ignorance and greed and waste constitute a menace greater than the atom bomb to our survival on this planet, one came away shivering and on tiptoe, treading on a crust thin as eggshell and constantly growing thinner. . . . Nor was the protection of the animals at any time presented as an object of concern except in respect to its material or intellectual advantage to mankind. . . . Ask ourselves if there are not resources to be conserved which transcend the material ones; the beauty of sunlit wings against the sky, of unhurt living creatures swift glimpsed in field and forest . . . we may ask ourselves if these are not of greater worth than anything which may be derived for us by science from their dead or exploited bodies.'

'Predators *par excellence*, deficient in logic as in loving kindness, we have judged it good to increase the number and length of human lives until the pressure of population

threatens its own extinction on the unexpanding surface of the earth. And we are doing this at the cost of countless cruelties to the other sentient races of creation.'

Alice was right, and the conservationists of the world realised the danger of this great horde of human locusts tearing through our timber and plant and soil resources, and mutilating the other animals. But at one and the same time creed-fanatics and politicians in many countries ranted about capitalisms, and communisms and totalitarianisms, and all the inflamed 'isms' breeding like plagues in a man world of overpopulated cities, where the performers, waving flags and arms and uttering human howls, were blown up with an idea that somehow they were important in the scheme of things. They forgot how recently they had waved their lemur-like tails from the trees of the great unraped forests, as common ancestors of the monkeys. And now they scratched at more fleas than they had then.

There was talk of a cure of unrest in the world being to raise the purely material standard of living and literacy of the masses; but while poverty resulted from low productivity, increased standards with better farming would be counteracted by ever-increasing demands on natural resources, unless a vast reduction in human births came at the same time. But what grounds were there for any such hope?

In an all too brief visit to that great land Australia I had been driven through country of once tall gum forest; what had been magnificent trees were stone-dead bleached sticks reaching toward the sky from parched, dry earth; ghostly memorials to a great crime. Cool slopes where breezes had set the leaves whispering, that assisted the rain and controlled erosion, were gone; the result of deliberate ring barking to make fleeting grass patches from which some wool and meat could be snatched before desert took over. A land where apparently hundreds of thousands of cattle, and sheep too, driven out to live on semi-desert, were

abandoned periodically to the tortures of slow death in the droughts. Men gambling on the weather with these creatures as the chips.

Cattlemen from the distant stations talked to me of their concerns. About the rabbits, now labelled as pests by ourselves who had sponsored them; trapped and put into pits until they accumulated in a misery of sufficient numbers to be killed and taken fresh to the freezing plants. Then had come the pathetic myxomatosis, a virus disease apparently largely insect-borne, deliberately introduced yet again by us to kill more rabbits, in an effort to correct one mistake by what might well be another. We could only wonder how long it could be before the virus, forming mutations in those rabbits which had become immune survivors, might even become transmissible to man himself, the originator of the trouble.

But not only were the rabbits named as enemies, but the kangaroos and the camels, and the wild horses now referred to with some disparagement as 'brumbies'; creatures which had served us well in the past but for which we now had little use in our increasingly ungrateful materialistic age. Their only offence now was that they asked to share a little of the grass the Creator had provided, just to keep alive in the sunshine too.

The demand frequently was for such to be shot. How dared they also have a desire to live? And the Dingoes, the now wild dogs that had again been introduced by humans in past ages, seemed to know the danger to the country of too many of our grazing sheep and obeyed the urge Nature gave them to do a little to reduce the numbers. For their pains they too were trapped, and poisoned. There were stations where the brumbies at times upset the cattle and the dingoes overdid the killing; but it was the general attitude of our intolerance that was so frightening. How similar it all was to what we had gone through in old England and Scotland.

Everything was labelled as a pest that did not directly help to put money into the pocket of the arch-pest of all, the new animal that had invaded the land a mere few years before. A country wherein the black human Aborigine had lived in harmony with his surroundings for untold centuries was seeing the descent to cities and the unhappiness of modern economics; with already signs of the creeping disease of excessive secondary industries that was known as progress.

And neither were atomic guided missiles, essential though they were, very rich in body building nourishment. Some extremely capable men in the country were worried that, while some forestry and agricultural authorities fought for better things, exploitation showed all too few signs of turning into development, but too few also were their voices. Could the rest of us now stand by and watch while erosion in the wake of the ringbarking and the bushfire horror of wildlife death enacted the same old stage-play and forced this destructive and at the same time apathetic human intruder to a last dry-land stand with his back to the sea? It might even be after what had once been looked on as another pest, the prickly pear, had been reintroduced as a last hope. If we did sit apathetically by in our armchairs in overcrowded Britain, the peoples of all other nations were not likely to remain content as inactive spectators, while our own blood brothers in a population less than that of London had to leave to our children so much of the work of trying to save a vast continent that could take Europe within its coastline.

Meanwhile Canada was hailed as being on the crest of a wave of prosperity, which on analysis, apart from the old mining of timber and wheat, proved to be not a great deal other than an extension of the mining of oil and metals, neither of which provided much more to eat than the guided missiles. And I had watched the life-giving soil of her Prairies, mixed with the smoke of the burning forests of

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that North American continent, too, being allowed to blow up and away toward the ocean.

Through it all, from yet another sorely abused part of our planet's surface, Africa, came the rumbles of the drums of trouble. It was world wide. Man was inheriting the earth.

How long has one to spend travelling and enquiring anywhere before being in a position to criticise constructively? I would surely have to explore all of these pathetically still lovely Australian and African continents too, not just isolated parts of them. Could I ever be able to judge others? I was pretty sure I had made as many messes as anyone in my own life. Yet it was sad to find those same mistakes that Britain had made down the centuries apparently just being repeated in the lands to where our own folks had emigrated. How desperate was the need for emigrants who would go overseas, not to become successful exploiters, but realising the obligations they had to leave these new lands better places than they found them.

But against all such depressing events, there were unmistakable signs in many countries of a heartening change of attitude.

* * * * *

The urge to sort out the entries in the well-worn, oil-stained diary started off the Isle of Capri after the Sicily landings of 1943, and the pencil notes continued in the shadow of the Saqqara Pyramids beside the great Nile, while little jerboas and the Dung beetles were busy in the sand. And later, wandering by the shores of Galilee from Tiberias, I wondered if any of the orthodox religions the world has known could really help before it was too late. It would surely have to be something better than we had had so far, and only if it involved a universal return to the basic laws of Mother Nature that all animals other than man observed; and fundamentally that we borrow only what we put back. Religions have come and gone down the ages

as keys that just do not fit the lock. Can we get much help from what has been handed down as the Christian Bible when it so lamentably ignores our fellow animals? Would the real Creator have allowed that? Were the donkeys and the wild creatures around Nazareth so wonderfully treated that they required so little consideration in the story? And what had the poor Gadarene piggies done to deserve what they got? No; there must be some of it missing: and distorted though it must have been in the telling, so much of it is such a fine story. But would He who walked on the surface of this beautiful inland sea have allowed a cringing supplication which seems so much like a beggar's ode to himself to be called 'The Lord's Prayer'? How disgusted He must be at all the bickerings amongst the authorities of our many religions throughout this little world of ours. And on how many of the other myriad planets of the universe are there organisms that squabble about Him too? You have to get away from the cities and religions of men to fully realise how much finer the real Creator must be than anything depicted by our civilised creeds.

Is it such a far cry from the Sea of Galilee to a London theatre? Not when I can hear Dolores Gray sing, 'Still I'd like to express my thanks. I got the sun in the morning and the moon at night'—under the prosaic name of *Annie*, get *Your Gun*, a play in which one song alone to me put Irving Berlin among the immortals.

And Wilson of the Antarctic put his greatness into these few words when he wrote: 'I feel inclined to kneel before anything beautiful, and the more humble and lowly it is . . . to kneel and kiss a flower in the woods.'—Wilson never for a moment thought about himself. Every life he touched was made better and happier for that touch.—Surely the complete religion in twenty words.

I am sorry that so often in this book I have had for clarity to conform to custom in the use of the word 'humane', meaning as it should, something kindly as done by humans.

Tragically we have to admit that in practice the words have often little in common.

In the end I am content to have the same fate as the Penguins, and Whales, and Seals, and the little wild things who cry out in the night when the traps set by humans close on their paws; and all the other creatures sacrificed for this that is called humanity. If these people have no souls, then I am grateful to the Creator that he has not given me one either, and I shall not have any churchman taking up his time making arrangements for me. Perhaps I can carry a small feathered person along, as I did Brownie at South Georgia, and, with the other arm round some furry neck, we can set off together into the great beyond.

Chapter One

Through All the Seas



Naught is more sad than safety: life is best
When every day brings danger for delight,
And each new, solemn night
Engulfs our whitening wake within the whole.

AUTHOR UNKNOWN

Through All the Seas

THE granite city of Aberdeen, August, 1939, a busy fish market and the morning air like wine. But an atmosphere of tension and uncertainty in human affairs had given way to a 'stand-by'—for everyone. The larger trawlers like the *Emily Rykens* were not sure whether they would get another fishing trip in, and already the *Star of Orkney* from far distant grounds, after unloading her fish, was at the store wharf getting her trawling gear ashore and preparing to fly the white ensign. At the dry dock, mine-sweepers were getting a rush fit-out. Welding arcs flashed and sputtered.

I had a tramp along the sands that afternoon before an appointment with Harry Gordon at the Beach Pavilion. Then with the westering sun the *St. Rognvald* cast off from Matthews Quay. The 5th/7th Gordon Highlanders were crammed into every corner on board, and I stood on the boat deck on the way to emergency relief of a Shetland doctor, as a last home journey before work in Labrador. But was another war going to upset all plans?

The port control hailed us.

'Where bound?'

'Kirkwall.'

'Thank you.'

The night was cold and dark but for the twinkling stars. There were not nearly enough bunks to accommodate the troops, but our foredeck was piled six feet high with cabbages for the Scapa Flow naval base, and it didn't take the bunk-starved Gordons long to emulate their cave-dwelling ancestors and excavate burrows in those cabbages. War was not yet declared and flashlights still allowed on

deck, and as I prospected for a spot for myself to have a quiet pipe, the torch revealed a wonderful example of biological co-operation. Sound asleep and snug in their green, leafy bedrooms lay the Gordons in their greatcoats, while all over them in happy abandon crawled the most beautiful, luscious, green caterpillars as fat as my little finger. Peace, rest, and warmth; the initiation of two new species to the alumni of the North Sea.

Footsteps sounded in measured tread from the deck below the bridge, and from the darkness, to the accompaniment of the steady swish of the bow wave as we rose and fell on a calm swell came the age-old voice of a Tommy—

I wouldna be a German, I wouldna be a spy.
I'd rather be a sodger in the H.L.I.

From a Gordon Highlander from Deeside that was indeed a compliment to the City of Glasgow's Own.

Kirkwall, and a black-out already in force. Just little blue lights at the street corners that gave the town an *Arabian Nights* atmosphere. Then our soldier friends in the wee sma' oors marching through the flagstone-paved main street, out to the country beyond and the defences of Scapa; but I couldn't see as they passed whether their little bed-fellows were still with them.

With the daylight we were away again. On north past the green-topped cliffs of Fair Isle, and by evening Noss and Bard Head coming out of the haze.

Lerwick, where the Shetlanders politely step into the shop doorways to let your car squeeze along the main street. And if you really must have a fresh piltock for breakfast you can catch it from a window of the Queen's Hotel; in fact, with a long rod, you need not even leave your bed.

The Herring gulls are the bosses in Lerwick. Beautiful, arrogant, monkey things, they go through the garbage-cans and then sit on the roof-tops to go into spasms of ribald mirth at the daft humans in the street below. They don't

think about garbage when the herring fishing is good, but of late it had been so desperately poor. In clear, calm nights the shoals seemed to lie just as dormant as in the day-time down below to where the older-pattern drift nets could not reach. But even with echo-sounding and all the more modern gear, market prices were so often poor and the few fish oil factories not yet able to dispel entirely the soul-destroying spectre of dumping ever in the background. And A ex Lorimer of the Scots drifter *Family's Pride* would watch a gull sidling up to one of his herring baskets.—'There you are now. Those gullies have mair sense than us humans. Maist of our ain folk will not eat herring now, the finest food yet. Well, when the trawlers have torn the white fishing to pieces and the seiners have been through the spawning beds with their way o' workin', folk will maybe be glad of what herring are left, banes an all.'

But now like the trawlers, the drifters were being called up for a very different job, and the gulls would have to fall back on the garbage-cans.

* * * * *

The old car headed out across the Shetland mainland, skirting the voes with the piping oyster-catchers. Peat moorland country behind, that could look bleak enough when the sun's floodlighting was turned off, and it was hard to imagine it at one time covered with scrub forest. Twenty-three miles and you came to where the township of Walls hid at the head of a voe round a corner from the open Atlantic.

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The third of September, 11 A.M.; we were at war with Germany again. But the Eider-ducks puddled around the tangle just the same and the porpoises and cormorants patrolled the voe at their fishing. Car headlights covered now, and the crofters no longer knew if the doctor was at home by the lamp in his window. These were days of still

long, evening light when a quiet row in the little boat before bed was the finest sleeping medicine of all. Williamina, a fine, happy girl, was deaf and dumb. How did she know as she sat in the stern to turn and look straight down behind at the big porpoises ten feet below the surface long before I could have any idea they were there? Was there a wave vibration through the water to the boat? Was telepathy with the sea creatures yet another sense granted more to those deprived of other faculties?

They were days too when medical visits took me to the widely scattered crofts of the west side. When old Mrs. Fraser's heart protested at the strain she put on it and she collapsed in the cornfield, I had given her first aid and sent her a bottle with digitalis. Returning three days later, I found her sitting up at the fireside knitting—'Oh, I'm fine, Doctor, but I haven't got to taking your bottle yet awhile. I have a pirie bit medicine by me yet that the last doctor left me for my cough, so I will just be finishing that first.'—Teenie, a lass of thirty, was bedridden with mitral stenosis. She was the authority on the animals of the croft, and as she could not get up to see the ailing cow, the patient was just brought into her bedroom. Seven years later I was to return and find her up and about working the croft with no effort at all.—Perhaps it was time I got on with the engineering again, for Nature was doing the healing in spite of our witchcraft.

Walter Manson was a whaler, at home for a few months crofting until the next Antarctic season. I had met him first when his wife had hurt her back handling a fractious cow. After that I would sometimes meet him as he was getting in the last of the peats. And we would talk about the war and the whaling, and how the fish seemed to be leaving Shetland and a lot of the sea-birds with them, and whether it was the Gulf Stream causing it all. Until in the gloamin' the Isle of Foula lay in its deepening purple seventeen miles away to the west. The great lion's head of it rested on mighty

laws formed by the ridge of Soberie, and looked across the ocean wastes to distant Yan Mayen and Greenland. The tail end at the South Ness turned toward the Corriewall and, sinking gently into the sea, was an invitation to the Grey seals to climb out and lie around awhile. The water would deepen against the sunset backdrop until the sea seemed to melt into the haze that rose from the sea. A step and then another, and Noss, the black-and-white border collie, would get up at last from the stunted heather, and with an apologetic whinge, suggest it was time to call it a day.—Walter came in to see me later to get a medical check-up for another whaling season. He was joining a floating factory going south to Antarctic seas. He had lost a finger at the herring the previous year, but a fit man otherwise, and left Walls next morning to board the Aberdeen steamer at Lerwick.

And in half a gale in the night the dark waters to the south-west were lit with star-shells as an enemy submarine got within reach of a convoy. A war was on, and now we were needed elsewhere.

The De Havilland Rapide rose from the grass strip at Sumburgh, the southernmost point of Shetland, heading south.

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A landing at Kirkwall, and we rose again from Wick. Down the coast below us a mined oil-tanker lay awash, but still on fire. This was getting nearer to realities. Up to now our casualties on Shetland had been a rabbit and two sheep. The Orkneys had known more about it with the loss of *Royal Oak*. Little Finland had been invaded. How quick we were to forget that when it should have been burned into our memory as the key to what was to be expected in the years to come.

After a brief sojourn with the Army in Edinburgh, in time to do a little with the wounded from our destroyer

Conrad after a party she had with the Germans in a Norwegian fjord, the path led north again to Orkney. That night the sky over the Scapa naval base was lit with the flashes of bursting shells as a grid barrage went up to meet the German planes. Next morning, waiting for final destination orders, I walked up the hill behind the hotel headquarters in Stromness, and sat down beside the bumble bees busy amongst the wild thyme. What a delightful, happy, busy buzzing it was, just the 'whatever lunacy man gets up to this has got to be done' type of buzz. And I lay and thought—why do Nazi or Communist or any other kind of dictators never take time to study bees? Perhaps they did; but no, for if so, then they would never become dictators. To be a dictator you must first feel important; and to be completely ignored by a bee that never has time to pay attention to a mere human—well, just because what he is doing is so much more urgent—is to be made to feel a very inferior sort of person.

Now, all this can be very disconcerting when you want to talk seriously to a bee, especially a bumble bee, because the only time he will pay any attention to you is in the evening, when he is drunk with nectar, and then he just clings to your finger and waves a leg in half-witted salutation. If you are half-drunk yourself you can be really happy together. But then a dictator seems rarely human enough to get drunk; it would lower his dignity and sense of that importance. So if he wants to continue dictating or any other kind of 'ating' or 'ising' of his fellow men, he must just never under any circumstances go near a bee.

Northward again, and back in Shetland a mother Eider-duck with her babies held up our airlines bus as she crossed the road, and the tiny newly hatched gulls and terns around Sumburgh and Fitful Head seemed symbols of the new dawn that would come again. Four Gloucester Gladiators with an indomitable airman, Flight Lieutenant George Chater of South Africa, to lead them, was the fighter defence of the

whole of Shetland. And backing them up against a landing from Norway, a few rifles, rolls of barbed wire and some anti-aircraft guns. But the puffins around Sumburgh Head naval station were quite unconcerned and continued to flitter around their nesting burrows in their gardens of sea daisies. They stood in close-packed ranks which gave way and closed in behind as each rabbit hopped along the runways he had not long previously had to himself. A peaceful, happy invasion this. Why could man not emulate the other wild creatures in their tolerance of each other's ways of life?

A happy day it was when I pitched my tent with the 241st Anti-aircraft Battery on Ward Hill close beside that Sumburgh fighter base. Cardiff lads, and a grand crowd, with Major Seel a very fine O.C. Alarms were frequent with Jerry only a hundred and eighty miles away; but late one night a medical call came to go at once to Exnaboe, a mile or so away. There was a machine-gun company of the Gordons there, and, prepared for anything, we turned out with the ambulance and four stretchers, only to be met by the unit officer to say it was Mr. Mainland's cow Daisy at the farm.

Daisy had mastitis, lying with a tender, distended udder and a temperature of a hundred and five. Mr. Mainland had a tin of antiphlogistine, so, heated on the peat stove, this was spread out in the centre of an old linen sheet off one of the beds. Four holes for the teats completed the poultice. Daisy was able to stagger up to let us get the teats through the holes and the sheet tied up over her back in two lovely bows. Then a drench of half a pound of Epsom salts and half a pound of Fowler's black treacle amongst hot mash in a bucket and the patient closed her eyes as she drank it down. With her settled under a warm blanket, we turned our shaded headlights back to camp. Mrs. Mainland drew off any milk at frequent intervals and the cow made a fine recovery. But even after the battery sailed for home again,

I was never allowed to forget the night we attended Daisy with an ambulance and four stretchers.

These were days of long northern twilight, when a newspaper could be read outside all night, and the whimbrels answered the oyster-catchers away down in Quendale Bay. The Battery did everything by trumpet call, but when alarms went for 'Stand to', Lieutenant Wilkinson always said the Germans deliberately timed them for when he was already answering other alarms of Nature.

It was windy on Ward Hill and heavy extra guy ropes were needed from the top of the bell tent through the ventilators. But the door flaps were nearly always wide open and timid little people would peep in. Mice had a hole at the bottom of the pole, and a baby rabbit was certain he could taste salt on the guy pegs. In late evening the gulls would come down and walk quietly about, making sudden rushes here and there after daddy-long-legs, or moths perhaps. Then one of the gunners brought along a hedgehog, carefully carrying it on a shovel. Prickles had a rabbit snare loosely round his shoulders and was none the worse when it was removed. For a day or two he lived in an empty ammunition box with a saucer of milk, and during the night I would be awakened by a 'Sniff, sniff' into my ear as I lay on the ground in my sleeping-bag. Then in a few moments I could hear him going the rounds inside the tent, when now and again a second's silence would be followed by a smacking of lips as another fat snail went the usual way.

Meanwhile, the Battle of Britain raged in the skies away to the south.

* * * * *

Another farewell to Shetland and away again to the inevitable preparations for overseas. London—the St. Paul's fire blitz; flames and acrid smoke from Fleet Street to the Bank and beyond. At the time it seemed impossible that anything of the City would be left. But next night the

starlings in their thousands were back at the Cathedral as though the holocaust had been just a passing thunderstorm.

A service troop convoy slipping down the Clyde. North first and a swell in the area of Rockall. How did these pilots on *Argus* take off and return to her flight deck in such a motion?—Then warmer weather after turning south, until the Atlas Mountains lifted away back in the haze. The bright roofs of Tangier, and slowly alongside the quay at Gibraltar. The bombs had been here, too, and what had been cool interiors lay open to the sun, with rubble scattered amongst the palms. Then the convoy base at Freetown, and as some of our nurses went ashore to Mount Oriel Hospital the brown bush kites picked scraps off the water daintily with their yellow feet and ate politely on the wing. As our propellers churned the waters again that black boy in the loin-cloth was certainly happy as he sat in his canoe waving a paddle in farewell—'Goodbye, goodbye, happy birthday, hallelujah, amen.'—What did he really think of this latest effort of white man's civilisation?

Along the Gold Coast, Liberia, with the sheet lightning flick, flickering over a mysterious continent; and the sea next day a yellow green with plankton forms in a suspension of eroded soil; the life blood of Africa bleeding through the great rivers. Then Nigeria, and Lagos in the distance as we moved in past the breakwater looked as though in a setting by the Thames at Maidenhead; but heavy, steamy palm-house smells.

On land once more it was a sticky heat even at night, when under a mosquito net you dripped sweat until the pillow squelched, and in the morning the big lizards chased each other over the corrugated iron shed roofs and disappeared among the pawpaws when you tried to catch them. There was the crowd of native boys chasing the ostrich down the main street, while a fox terrier, not to be outdone, had his own rodeo with a big male lizard, nearly upsetting the native traffic policeman as the quarry dashed over the road

to take refuge up the bole of the nearest palm. There were some tropical nights when the Southern Cross hung in a clear velvet sky and we went to the open-air cinema; the screen a white-painted expanse of concrete wall. And as we watched Betty Driver in *Let's be Famous* the lizards chased her across the heroine's face and had to be swept off energetically with palm branches.

Massey Street Maternity Hospital was ably handled by Dr. Ogle and her two most efficient nursing sisters, Molly and Ursula, who hailed from the Falkland Islands and the Welsh hills. A visit to the sisters' garden in the evening was required to put war into its proper place. The frangipani blossomed beside the tall stately casuarina trees with their delicate, waving tracery, and the land-crabs lived at peace with the world down a burrow in the lawn beside the flowering bougainvillea. Dinner with the sisters was a delight, when Festis the head boy ensured extremely good liaison with the kitchen. Meanwhile the little three and a half inch house lizards stalked flies on the ceiling and had arguments with each other that at times became heated when both parties lost their grip on the situation and fell off. Once it was into a plate of soup, but they just streaked off over the edge of the table, leaving it to be put to rights by Festis. It was as well though, to see that the lizards were cautioned not to do aerobatics if colonels or naval captains in their best uniforms were asked to partake, although to me the soup episode was worth a uniform any day.

But up-country the war was making things more difficult than usual for the missions. They taught that 'head-hunting' was wrong, but when the natives asked why it was that white man was allowed to head hunt on a tremendous scale by raids on cities with bombs from aeroplanes, there could be no answer. It would seem that the best we can do is to retire gracefully from spreading our ideas and leave these people to customs which are so often more kindly than ours. You can trust the so-called heathen Fulani and the Hausas

of the north, but don't leave your watch or valuables around in civilised Lagos. It is sad that contact with white man who teaches the value of material things brings such results. Thy sins shall be forgiven, can be a dangerous doctrine. Would perhaps a little less religion, and more of the teaching of kindness to all living things by our own personal example, not be more worthy of our attention?

* * * * *

From Northern Nigeria to service with the merchant convoys on the North Atlantic was just one of those changes in war, but I missed the vultures that sat on the hut roofs and wandered in and out of the houses like rather sad turkeys, strictly protected by law as unpaid servants of the cleansing department. I missed my friends the Flying foxes that chattered in the mango trees as they feasted at night on the ripe fruit. And I had to leave behind the little green chameleon Charlie, who stopped calmly with one front foot lifted in the middle of the roadway to let a whole convoy of trucks pass over him before wending his slow, deliberate way over to where I sat in the ditch ready to throw stones at him between the passing wheels if he threatened to move too soon. What a difference to life these little folk made.

A five and a half knot convoy out of Freetown heading for England up mid-Atlantic in an oily, tropic swell seemed like sitting ducks. We lost our first ship two days out, bombed as she fell back with engine trouble. And after a night lit with star shells, we were another five less in the morning.

Then the Atlantic ferry service day after day, watch in, watch out, month after month. A black pennant streaming from yon corvette hunting a contact. Depth charges as she drops astern and back and forward over the spot. Halifax, Boston, Montreal. Back again, the merchantmen low in the water, trucks, tanks, and aircraft on decks like mummies in

their wrappings, and the holds to capacity with foodstuffs and H.E. bombs. Into port again to unload—and to have our emergency life-saving rations stolen from the lifeboats.

In the midst of it all certain things strike us more than others. On one trip, again as convoy flagship, we loaded at Saint John in Canada, amongst assorted weapons of war, two thousand crates of Kotex sanitary pads, that worked out at enough to supply all the needs of our girls in Britain for three days. In this battle of the Atlantic it seemed a fine touch that amid our scramble for food and munitions, our Sea Transport authorities did not forget the comfort of those lasses of the factories, the home and the Services, doing a great job through the weary hours.

October 1942, and we were westward bound again. Malta was the George Cross Island, and the Germans had reached El Alamein and Stalingrad. Dieppe had been raided by the Canadians. It had been days of dirty Atlantic weather; but now the wind had dropped by the time darkness had come once again, and a young, fitful moon could be glimpsed occasionally through scud clouds.—I had just stepped inside the wireless room when the torpedo struck us and I remember the head of Neil MacDonald the radio operator suddenly blurred, and all his equipment becoming two of everything as I made a break for urgent things to be done.—Rockets from the bridge, then our steady red wing lights as the ships behind swung out to avoid us and slid past. Astern, a tanker sinking too.—Then away to a lifeboat in the Atlantic night. Twelve hundred miles west of Land's End. The sort of thing Jerry would do, just ten minutes before dinner, and it seemed stupid to be sick suddenly when there was the grub going up in flames with the galley. Even so far from land, Fulmar petrels skimmed round us in curiosity, just visible by the now hazy moon.

The breaking wave crests quietened, and at length a grey shape coming up; one of our own corvettes. She looked a tremendous size now; so tiny before from the decks of the

old ship.—Scramble nets alongside us at last; and there was that five weeks' old baby that rolled out of the blanket back into the sailor's arms as it was tossed up from the heaving lifeboat, while the young mother had cause for silent hysterics.

Commander John Hodgkinson of the Canadian corvette *Morden* was the kind to inspire confidence at once. Submarines were still around and we dared not loiter. The chief engineer knew his job too and drove her hard. One hundred and ninety two survivors and the crew of seventy-five on that little craft for four and a half days diving through head seas that threatened to lift the for'ard gun through the wheelhouse windows. Men, women and a baby; they tried to sleep on the bunks, lockers, the steps of the companionways, and massed on deck behind the funnel and on the depth charges aft while the water swept everything. The officers' lavatory door remained jammed open by prostrate bodies, and the w.c. itself was the only piece of equipment without a permanent occupant. No one paid any attention to who used it, and those too ill to get there themselves got strong armed assistance. Through it all our cooks produced two magnificent meals a day.

Then the mist-wrapped shores of Newfoundland. A winking Aldis lamp from the Cabot Tower and the sheltered water of St. John's Harbour.



Chapter Two

Two Canals to China



This is how Jerboa was drawn from the bridge of our ship going into the Suez Canal from Ismailia to Port Said. He is really just the size of a not very large rat person but he is made very big in the picture because he is very important as he inspects the ships going through his desert.

For life, with all it yields of joy and woe,
And hope and fear, — believe the aged friend, —
Is just our chance o' the prize of learning love,

...

ROBERT BROWNING: *A Death in the Desert*

Two Canals to China

THE Tropics again, this time with a naval striking force. Better news was coming from the battle areas, and the Germans had been cleared back to Tripoli. We were steaming down close to the African coast, past Dakar that had been hell's little acre not so long before. Cape Town for stores, then round the corner and the Mozambique Channel, where you sweated all night with the portholes blacked out. —Line ahead now under a new moon, into the Red Sea for the run up toward the lands of the Bible. It was cool up on the bridge, and Captain Moore would discuss the stars, and the chaos man was making of his career on this particular earth. Smuts was right, of course. Just two weeks before from Johannesburg we had picked up at sea the Field-Marshal's broadcast.—'The State should not be made a fetish as the tendency is to-day, but individuality encouraged in the true service of God.' He had always reminded us that we are members, not of parties and creeds, but of one another. It was individualism in the path of unselfishness, and not State control.

The Red Sea.—There is a timelessness about the desert and the hills on either side which can be very comforting. Many men have known the spell of the desert, the spell she uses when you give her the chance, not when you have to dash over the sand in armoured tanks that roast you alive and serve only to put men back a hundred million years and more, when the great reptiles of the Jurassic and Cretaceous eras did much the same travelling around at times, but with much less damage and expenditure of brain power. And under the stars that night I lay on the monkey island above

the bridge away from the noise of the ventilator fans with a life jacket for a pillow and drowsily wondered about it all.—Five hundred million years since the start of the Cambrian period and life really got going. If man ceases to misbehave and controls himself in both reproduction and self-destruction, he might prove to be the ancestor of some creature which will be alive in another five hundred million years; but what will that creature be like? One of our Cambrian worm ancestors rejoiced in the magnificent name of Mr. Balanoglossus. Will our future offspring look as different from us as he did? They may if we deliberately start an era of arguing with the help of atomic radiations.

The desert is not the dead place so often imagined, and although some of the dinosaurs did go around like enormous kangaroos livening up the place generally, it is probably more pleasant as it is now, with just the camels and gazelles, and the jerboas going around like tiny kangaroos.

Akaba, at the head of the gulf on the ancient caravan route to Mecca, was the stage chosen, after two months of training, for our final Commando dress rehearsal right on the doorstep of Lawrence's headquarters of nearly thirty years before. And how beautiful the ever-changing colourings of the desert and the surrounding hills could be as the sun came up out of Arabia on his trek over to beyond the scenes of recent battle away to the west.

Then round into the Canal; carefully past the remains of bombed tankers, as the great, imperturbable sands stretched away behind. Gaiassas took refuge against the bank as we passed, to let the banked-up water at our bows swirl past them to settle behind us, before continuing on their way; the beautiful parabolic curves of their sails just works of art. A big ship even at five knots can do a lot of wave damage in a narrow waterway like the Suez Canal and it is a severe test for a steersman.

A spring babel of finches from trees along the bank, while snow-white egrets stood as though half dreaming of

the past. And now here was this new mechanical civilisation disturbing them. Only twenty-eight years before, as the crows fed quietly on the cattle ticks around Ismailia, they had been disturbed then, too, by an army of humans, as Turks from Beersheba were going into battle with other tribes, French, Indians and British. Were these now more to be the big iron guassas sailing to fight again? They made noises like the monkey people far up the Nile, but at least they did not disturb the cattle with the ticks this time.

Out along the coast of Africa; Derna shimmering in the distance. Past Benghazi and up toward Tripoli, a Tribal class destroyer sliding past with that beautiful feathery cascade from her bows. Due north now in a stiff breeze and the smaller landing craft that have joined us making a rough passage.

Midnight—our engines stopped and the moon setting almost at the end of her first quarter. Heavy bombers from North Africa low overhead—land near now and an inferno away on the starboard bow.

Sicily—10 July 1943—and Syracuse being pounded from the air in the light of parachute flares. Tin hats and blackened faces packed on our boat deck: 02.40 hours, assault craft down gently in the water: the muffled roar of engines, and white wakes trailed away into the night ahead.

Dawn, and we backed out as Mount Etna for a few minutes was like a pale pink mirage above the clouds, as though suspended from the one remaining star. We got out of it with fewer casualties than we could have hoped for, cleared for Malta and away for reinforcements, stopping for only a brief minute or two to put our dead over the side.

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D-Day was two months past and the Germans in retreat from Normandy. A temporary lull at sea and for a few brief months we landed in the Middle East again, where a scheme had developed to train and send ambulance teams into the

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Balkans Desert journeys were a relief from the noise of Cairo, and the training went on. The English girls who drove and maintained the transport ran the show. In jungarees, Anne, Ruth and Sibyl, crawling under trucks or digging them out of the desert, oil and sand in their hair, on the trail that was to lead them to Greece they never grumbled. And when we lived with the Yugoslav families in the desert camps, everyone smiled, always smiling; the boys and girls, their parents and grandparents that had survived. And in the cool of the lovely, starry desert nights bravely danced and sang their way toward the future.

Back at sea, it was the Pacific and the last lap; but how long a lap was it to be? July 1945—a trooping assault ship on passage through the Panama Canal this time and the pelicans flapping past like pterodactyls of another world. The ship's kitten limp and listless in the heat, but happier after a cold bath in the doctor's wash-basin. Then at length far on the horizon in the morning light the peaks of the Hawaiians. Winking Aldis lamps again—What ship?—We were headed for Okinawa and—Tokio. For the present it was Pearl Harbour with those gently waving palms as though the Japs had been but a faery story.

The pathologist of Queen's Hospital took me up the hairpin bends of the Minoa Valley in his car. Among the oleanders and the perfume of hibiscus and yellow ginger flowers, the scent of the Islands. The beautiful velvety-looking, pendulous, maroon cat-tails of the chenille, and the trees of red and pink shower. At the head of the valley we ate guavas, juicy and sweet like pears, that looked like lemons but had pomegranate centres. And we looked out over an island of beauty. Why had we to go to war here just as in so many other parts of the world, when all this was laid out by a beneficent Nature for the benefit of all who would treat it with respect? The Japs had a lovely country of their own. Why had they to come to try to make this look like hell? Yet overbreeding was going to spread a hell through

a lot more of the earth's surface before many years were out.

The land dropped astern. Those islands of Hawaii their claim must surely be a true one—the land where you cannot remember what you came to forget.

West by south for the Marshall Islands now, and a sticky, oppressive atmosphere with the cabin at ninety-seven degrees Fahrenheit night and day. The only way to sleep was to lie on the floor on water-soaked sheets and turn the fan on you, then, when you were wakened with the heat in a couple of hours you got up and soaked the sheets again. Blessed relief on the nights you could stay up on deck. On then to the Admiralty Islands to be greeted by a babel of parrots from the palm-fringed shore. The Philippines: Manilla in the rain. Mud, and tanks wallowing through what was once a main street. Frogs croaking in the ditches, ruins everywhere and more mud.

How quickly the whole picture changed—atom bombs on Japan. Then the white flag, the Tokio invasion off, and our orders changed to occupy Hong Kong. Sunday, 2 September 1945; the Japanese surrender, and speeches declared that the world could now face the future with great confidence and hope—and we forgot again about little Finland.

We crept to the inner harbour of Hong Kong and round Kowloon Point. Shan Shui Po prison camp: the Lieutenant-colonel of the Royal Scots there with a remnant of his men after three and a half weary years. Medical neglect, and four ounces of rice at midday with a tablespoonful of water, then eight ounces of rice in the evening with the same amount of water. The flowers bloomed around the huts, and yes, Nature blossomed in all her loveliness in Japan too, at least in the places where no bombs had fallen. She blossomed side by side with the evil of men everywhere. Why had it to be? Can the human work out his own salvation by himself?

Nature has been the wise mother through all time, but man the rebel offspring thinks he knows better than his mother and will only learn his mistake through hammering

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of misery and adversity. We have persisted in sending missionaries to people nearer to our Mother than we are, only to drag them down into our own misery. I wandered back toward the wharf at Kowloon, the streets with piles of garbage and blocked drains among the slums.

The Chinese prisoners had been kept at Stanley Camp on the far side of Hong Kong Island. Getting there by some Japanese transport, I had their story from Dr. Dean Smith and his wife Catharine. Not such physical wrecks here, but the meagre ration of rice was fouled with mud, rat and human excreta, cigarette ends and the bodies of the dead were everywhere. Tropical anaemia and dysentery co-operated with the Jap masters and everyone vomited worms. The struggle against beri-beri was constant. They had been treated negligently although not brutally by the Japanese, but they had seen the Chinese destitute got out of being dumped from boats out in the bay while the Japs went on below the camp walls. Gradually increasing weakness and loss of memory was perhaps Nature's kindly way of easing things.

We were practically a hospital ship now as we cleared for the Philippines again, then Singapore and homeward, this time through the nights in a blaze of lights. Was the war really over? It didn't seem so long now since those Shetland days.

We moved slowly up to the Liverpool landing-stage, where relatives and friends put on the best welcome they could for the exiles, against a grimy, drab background of dilapidated sheds and buildings. But there was an aloofness about it all, too, that was sad. It must have been an anti-climax to those passengers of ours after the picture they had dreamed up over the years. It was as though they had been away too long; and as I stood on deck for a few minutes, more than one beside me wished we could turn and go back.

That has been the pattern of many homecomings, the anticipation the best part of it, when many people of whom

you had a high estimation you found had lost interest in nearly everything but their own daily routine. But your perspective straightens out again gradually and you realise your first reactions are not always very reliable.

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London, and milling humanity, but not a very happy humanity. Wartime camaraderie seemed to have faded, replaced by an atmosphere of bewilderment. Were they all perhaps wondering what happened now and that the end of the war here too was an anticlimax? I never remembered Piccadilly like this before, and it was much the same at the docks, but then I too had been away so long. Bus conductors and conductresses were nervy and irritable, not a good sign as to the way things were in any city. Had war helped the human race this time? Had this been the proving anvil of adversity? No, it seemed to have proved just that the unselfish were more unselfish than ever, and that the selfish could reach even greater depths.

This wouldn't do—but by the time I had gone out to evensong with the Richmond owls in the park I felt better. We expect too much of cities with the awful pace of the lives of their inhabitants, mentally tired with years of civilisation. Apart from the feeding problem, could the spread of such places like choking weeds go on much longer? If ruin did not come through the agency of further fanatical creeds leading to more war, would cities not come to an end in any case, poisoned by the products of their own congestion? In the biological world, over-population seems to invariably end in drastic thinning out of the species.

Would that be a bad thing in the long run? Out of the mess, Nature would surely triumph as always, and something fresh and cleaner form a new spring from the old decay. Class hatreds and the greed for power would be eased at least for a time on this poor old planet peopled by those who had refused to be swallowed up in the whirlpools of false values.

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Chapter Three

The Piglets go South



At the bottom of this planet lies an enchanted continent like a pale sleeping princess.

ADMIRAL BYRD

The Piglets go South

WALTER MANSON looked much the same, perhaps a bit more grey and a little thinner. Yes, he had been mine-sweeping after that early war whaling trip, when the factory had just escaped capture by a German Antarctic raider south of Kerguelen Island. Then D-Day had been no picnic and it had been good to see old Shetland again.

It was October 1946; we stood on the dockside in Middlesbrough, while, in the glare of floodlights like a film set, the great new whaling-factory mother-ship *Southern Harvester* lay having a last-minute rush of stores brought on board, to the accompaniment of riveting hammers and the fireworks of numerous welding points; while her twin propellers, on a turn over of her 7,500 H.P. engines, were slowly churning dirty water against the dockside. A big 15,000 gross ton lump of a ship with high navigating bridge well for'ard toward the bows, and twin funnels aft, in the red, white and blue colours of her owners, Chr. Salvesen & Co. of Leith. She looked like the offspring of a Great Lakes grain steamer and an oil-tanker. Her spacious top working deck for the flensing and cutting up of the whales was large enough to take three eighty-foot monsters in line ahead. The factory deck below was crammed with Hartmann and Kvaerner whale-blubber boilers and centrifugal and other separator plant to handle the oil before passing it to the deep storage tanks along the bottom half of the ship. The remaining factory space was taken up with plant for dehydrating the red whale meat.

Destined for work in Antarctic seas, she would act as mother-ship to ten steam whale-catching vessels the size

of crammers, supplying them with fuel and stores, and providing facilities for all but the most major repairs throughout four months of active whale-catching through the Antarctic summer, from the end of November to early April.

'So you're coming to look after us this trip, Doc.'

'Well, Walter, if I don't bring you back from this lot all more or less, it is Edith Manson herself I'll have to reckon with, and I doubt if I would get the best of that.'

'Doc, I'm going as a flenser this time. Now you'll see for yourself what it is like, but my father was a whaler with Salvesen at the old Olua Firth station in Shetland, and by all accounts it was a bit more pleasant than it is now. The Norwegian boys are all right, but I'm just not all that fond of this whaling. I've been on the catchers, but unless I had the skill to take the gun myself and kill the poor beasts decently I would not go back on them. The gunners, naturally I suppose, are not too keen for anyone else to have a try. The old man got over that, but it's perhaps not so good that some other countries have done it since. May be it's right enough the companies doing what these lads want because they depend on them to keep going to the ice every year. But the Shetlanders would make good gunners too. There's a lot of Norwegian money tied up in it all, but it won't be long by the looks of it before the whole business is finished with the rate everyone is killing whales.'

'From what the Government folk have told me in London, Walter, in spite of ninety pounds a ton for the oil, we don't need it badly enough now to risk ruining the whole future of the industry.'

'Well, I hope they don't mess it up. Of course, whaling means a lot more to Norway than to us, but Salvesen has been a good friend to Shetland.'

Three days later, four o'clock on a cloudy morning, we moved out into the river with a pilot who must have been

one of the smartest in the port. From the extreme forward position of the bridge, our own funnels, nearly four hundred feet aft, looked far enough away to belong to another ship. It must have been a headache to handle her, yet we seemed to be doing at least six knots down past the lines of vessels tied up at the wharves; and in that narrow waterway I was prepared for their paint to be scraped off any minute, if not something worse; but never a tremor from the bridge.

Four hundred men on board. The Captain and engineers British; the mate and half the flensers, cutters and factory hands Norwegian, just arrived from their own country. The remainder, including the two bosuns, were from the Shetlands and the mainland of Scotland and England. We carried some of the Norwegian harpoon gunners, who with whale-catcher skipper's certificates would take command of the catching vessels which had remained at the Antarctic base, South Georgia, from the previous season. One or two of the catchers which had been home for major overhaul were already on the way south under their own steam.

Two of the Scots mess-boys stopped me on the plan deck.

'You know, sir, the other lads and us was just having a look at the hospital and the operation-room and we just said—Well, whatever happens, we have a nice place to die in anyway.'

We were a week behind for the season already, so it was a case of final trials off the Tees, then straight to the ice. If anything went wrong, it would have to be string and sticking plaster, but we must go. A thick, black smoke-screen from the funnels showed the oil-burners to have other ideas. The Chief Steward's worries would be slightly eased when the trials party went over the side; and he had had more than enough of Government food officials—We were short of fresh vegetables, and could we have two hundred hundredweights of potatoes?

'Your potato quota for such an expedition is four hundred hundredweights.'

'Yes, we know that, but on a long Antarctic voyage they go bad.'

'Four hundred is the quota.'

Later in the season we had to shovel them overboard daily, saving perhaps twenty hundredweights of the extra two hundred, while the housewives at home queued in the hope of getting a pound.

In a pen at the top of the whale ramp at the stern, forty piglets were installed, destined to improve the breeding stock on South Georgia, and had already settled down to their new quarters. The pigman and his assistant had been able to carry them to their new home one under each arm, but it was to be a different story at the end of a four weeks' trip.

The cliffs of Dover and the herring gulls in the morning sun. Then out in the Atlantic two hundred miles west of the French coast, larks alighted everywhere aboard; misselthrushes too, while overhead for a short time sailed a solitary buzzard. A couple of hours and they were away, navigating on their own, without a glance at the compass that we were unable to do without. A helpless sort of creature man.

Then one of the little nomads of the ocean, a Stormy petrel, wind-buffed, came to rest on our deck, and, removed from reach of the ship's kittens, spent a night in the confines of the surgeon's cabin. Two or three times in the darkness I was wakened as the softest of little wings brushed my face in trying their strength again. Next morning he took off by himself from my hand, and, borne upwards above the mast by the updraught from the ship's side, dipped over us once in farewell, and away.

Then again two hundred miles from land, this time off Morocco, a robin appeared and took up quarters with the piglets, sitting on their backs quite happily. When they snoozed contentedly in the moonlight he snoozed, too, with his head somewhere tucked away, just a small person on a big ship keeping his feet warm.

The second of November and the jagged, sun-tanned peaks of the Canaries ahead. Engine trouble; our control gear failed as we came up to the pilot, and we had to turn out to sea again to avoid landing up in one of General Franco's banana plantations.

Berthed at last at the end of the breakwater wharf at Santa Cruz in the Island of Tenerife, nobody seemed to have remembered to supply the ship with a Spanish courtesy flag, so we lay without it. We had called to take on seventeen thousand tons of fuel oil for ourselves and to supply the catching fleet, along with the South Georgia shore whaling station. It would have been seventeen thousand pounds cheaper to have gone on to the West Indies for it, but we could not spare the extra time now; and that is just how fierce was the scramble to get south for whale oil.

So it was Santa Cruz for two days while many of the crew disgraced themselves on cognac. In the dark a sack would suddenly land on the quayside from somewhere on the ship, to be pounced on and carried off before the dock police could see or perhaps care to see. What the sack contained was something which would doubtless end up in the black market, but cognac was the currency. Broken heads, and signoritas who were not as physically fit as they should have been, landed me with extra work when we got to sea again.

With Bob the Sixth engineer I went up through the town in white shorts, to the mild interest of the inhabitants. I wonder why stove-pipe slacks have come to be so generally worn even in hot countries; they are not a very useful garment. Away from the streets, we climbed above the landmark of the bull-ring toward the country where the inhabitants lived in dwellings tucked away among the rocks. Far out on an apparently lonely hillside, where silence overcame the noise of the city, it came as a surprise to suddenly hear a cock crow close by, and find the smoke of a fire wandering upwards through the cleft of a rock overhang. And a black-and-white cow tethered in a gully showed by

her condition that she had mastered the art of living in the scrub.

A fine young mastiff came up to us, and his young master Rudolfo insisted on coming along to show us the hills. The Spanish name Perro suited the pup fine and he found it all great fun. At length, turning back toward the ship far below in the distance, we passed water-carriers slowly toiling up the steep mountain tracks and realised that every drop had to be brought from hundreds of feet below. Some containers carried on heads and shoulders. Other shy signoritas had their donkeys with water-bottles slung across the saddle pads.

Down in the town again we seemed to traverse more backyards than streets, but Rudolpho knew his way, and we learned that *marrana* was a sow, and our piglets were really *cochinos*. Perro came right down to the quayside to see us off, and, suddenly becoming very sad, pushed his head against my chest with a 'Take me with you' all over him. I felt sad, too, that we couldn't take him and his master both. And it was sad that our own country could not see her way to help Spain and her people when yet we tolerated a far worse régime in many other parts of the world.

A small cactus I brought down from the hills grew in an empty X-ray developer tin all through our stay in Antarctic seas; a little bit of that happy visit to these kindly people.

In the light of the evening sun bringing delicate colourings to the hills we headed south yet again, down the west coast of Africa on the long lap to South Georgia.

I was standing looking out through the cabin porthole thinking of those dwellings up in the mountains when the telephone rang. It was Captain Begg.

'Doc, we have five stowaways on board; I'm sending them down for you to check up.'

Five Spanish boys dissatisfied with Franco's food rationing.

'Franco no good, no *manger*—*barco grande* good very good.' They were fit enough, but consternation broke out

when it was realised we were headed for the glaciers of South Georgia and not the sunny warmth of Georgia of the United States, as they had imagined. But their philosophy was sound enough, too, and there would be clothes enough to fit them out. No it didn't matter—'*Mañana*, O.K.'

They proved a happy-go lucky, hard-working addition to our company. Francisco, Hose, Santiago, Jose and Tomas. They played hard, too, so hard that when Tomas had a set-to with Jose he came along to me afterwards with a swollen hand. He had broken one finger nicely and had to have a plaster to halfway up the arm. To Tomas this was wonderful, something that even with a broken finger he could use as a boxing glove. Needless to say, the position of the broken bone when it ultimately managed to unite in spite of its owner's efforts, was anything but beautiful. Tomas was perfectly delighted with it.

Even the moon looked hot in that dark-purple, velvety African sky. A heavy, weedy smell hung over the sea. Robin had gone; probably he felt the Canaries would do him fine for the winter. Meantime, the piglets were thriving mightily on orange and banana skins as a result of our call at Santa Cruz. Then a couple of hundred miles west of Cape Verde and Dakar in a calm sea, we came to a standstill for engine adjustments. A bolt jammed in the seating of one of the main engine-control valves, and a few other things besides. And the Chief Engineer, Mr. Crockett, would come up from below shaking his head: 'Ah well, that's the way they build engines to-day.'

The stoppage was for some hours this time, and the sharks accompanied by the blue-and black-striped pilot-fish swam round inspecting us. Three or four seven feet in length were landed in the bows, caught with a meat-hook and a rope, but it was just idle, useless killing.

'Why should you kill the poor beasts, boys? They're just going around keeping the sea clean and we don't need them for food.'

'But they're bad devils, Doc. We had enough of them in the war down here.'

'Aye, well, we all had a bit of bother like that, but you know well enough the barracudas often started any trouble and not the old sharks.'

Sailors are like that with sharks, but we caught no more. As the hook was hauled up a flying-fish suddenly broke surface at the bow, and what was probably a Dolphin fish (*Coryphaena*) close behind had him as he went under again.

One of the dead sharks was opened to get the liver, when three very active, eighteen-inch long, unborn babies flopped out on deck. One thrown overboard dashed off as though he knew just where to go. The other two swam violently round in the salt-water bath in the ship's hospital in company with a small five-inch sucker-fish *Remora* that was attached to their mother. For an hour they kept it up until the mother's blood oxygen in them gave out and they died. Or was it the temperature of our cold water that didn't suit them? Were they cannibals, these sharks? I could see no sign of it. They certainly refused to touch the dead bodies of their comrades thrown overboard.

It was cooler in my cabin, and John Duncan the Second engineer appeared all grime and sweat.

'I'll be in to use your shower, Doc. The Chief's down below again sweating his guts out and using language even I have never heard before. He sent me up for a breather.'

'Aye, and a decent cup of tea, John Duncan. But this is where the medical brandy comes in, and your other boys'll get theirs, too, when they come.'

'What a way to send a ship out.'

'Well, it's been a rush job all along, I suppose. I certainly have never seen anything like this whale-oil business the way it gets a hold of folk. Ask the Chief to phone me when you go down, and the bath is there when you are.'

Then under way once more among the flying-fish. No

had now for over two weeks, but what a treat to have the windows open at night. The last time in the South Atlantic had been with the Overseas Striking Force on the trail that ended on a sticky beach.

The temperature dropping and a freshening wind. The afternoon (four to eight) engine-room watch, their cabins along the side of the whale ramp, never needed much warming, as their time for being wakened coincided with the pigs' tea time. Then the Fourth engineer, who was on the twelve to four, would be coming along the alleyway with just a towel round him.

'Doc, those pigs of yours are grand pals, you and your pigmies.'

'What's the trouble now, William?' it was the Chief close behind him.

'Look now, Chief, when at long last I've had a wash and a shave and lying out in one of the hospital deck-chairs dreaming about the wife and forgetting all about the obligatory down below there—what happens? Out of the Doc's cabin comes a hail of a row that he says is called "Australian Ladies". And when I bawl him out about his ladies, he says: "Bill my boy! it must have been those pigs again. I'll speak to them." Aye, and it's not the first time those poor wee pigs have been blamed for singin'—"Happy we've been a' thegither" through their noses.'

Southwards steadily, until one morning at daylight, gigantic wings passed the cabin port-hole. The Wandering albatross, the escort that rarely ever fails ships on passage through the 30° to 40° south latitude area of the Atlantic. A ten- to eleven-foot wingspan and the quiet, watchful eye of all the petrels. Then a dozen of the great birds rode the up-draughts for two days; but on the third were gone as suddenly as they had appeared. We ploughed on, while the thermometer went steadily down.

The men were now busy all the time on the spacious plan deck, making wire strops for the use of the catching vessels

transferring whale carcasses to the factory-ship mooring, fashioning large, wooden toggles to anchor the winches in stripping the blubber; and laying a complete covering to the plan deck itself to protect it from slipping harpoon shafts in the whales as they were drawn in the spiked, gripping seaboots of the flensers and cutters, and the general wear and tear on the whaling grounds.

Fourteen other factory ships were also headed for the Antarctic; three more under the British flag, seven Norwegian, one from Holland, two Japanese and one smaller Russian vessel. But although we were in touch with our sister ship by radio as she was on her way from the West Indies, we saw nobody else.

Another day passed and another, then, skimming over the waves from out of nowhere came a flock of dainty, fast-flying little Whale birds (Prions), showing the beautiful, delicate sea-blue colouring as they passed, their quick, sandpiper-like wing beats soon taking them out of sight.

Snow flurries now, and at last, four o'clock on the afternoon of 22 November a great bank of cloud in an otherwise hazy horizon thirty miles ahead. Nearly an hour later, for a few moments a snow-clad peak uncovered and closed over again—South Georgia—that island 120 miles long by an erratic fifteen across, lying 1,200 sea miles east of Cape Horn. A dependency of the Falkland Islands, it has played a great part in the making of Antarctic exploration history.

It was bitterly cold on the bridge outside the shelter of the wheelhouse.

'Well, Doc, we're just about there, and you'll be glad to stretch your legs among the penguins.'

Captain Begg was only middle-aged, but an old hand at the game, from the days of the old supply ship *Caronda*, and when Sir Ernest Shackleton had been along and suddenly had to borrow a camera from Mr. Binnie the secretary to catch a particular cloud effect on Mount Paget. Times too when the Dependencies Survey men from Graham Land

to be transported home. Altogether the Captain was well known to the explorers and took great interest in their work.

'But the trouble is, Captain Begg, this is going to be such a fascinating spot with all these mountains and the animals and birds that it is going to be months, not days, I'll need ashore.'

'Well, to some folk, of course, it is just desolation. Look at that peak just showing on the cloud-line—that might be Paget. To the Scottish whalers in particular South Georgia is our first Antarctic outpost you might say. By the way, Doc, you're all clear for medical pratique are you? We have to fly the yellow flag here just the same as anywhere else.'

Yes, we were all set, and the snow veils cleared from the coast as we approached. South Georgia; here it was that most of the whale-catching vessels remained at the land stations through the long winter to refit and prepare for December, the first month of the Antarctic summer, when they would rejoin the two factory ships that used the island as a temporary base on their way from Britain to the whaling grounds some hundreds of miles still farther south and east toward the edge of the pack ice. Those of our catchers coming out after refit in the United Kingdom would have to call at the Canaries, or the Cape Verde Islands, then across at Rio de Janeiro, for fuel oil.

While still ten miles out we could just see the entrance to Cumberland Bay toward the Nordenskjöld Glacier away on the port bow some miles to the east of where we were headed. In there was Grytviken, the land whaling station from where the *Campaña Argentina de Pesca* conducted operations, and used also as the Falkland Islands Government administrative base. Grytviken had been the pioneering whaling station of the Antarctic, starting in 1903, and followed a year or two later by Britain and Norway, both here and at the South Shetlands just north of the tip of Graham Land.

A brief break in cloud again showed the great peak of the glacier south-east rising to over nine thousand. There must be more glaciers packed into South Georgia than anywhere else of its size on earth.

The mottled brown Pintado petrels, the Cape pigeons or 'Cap doos' of the whalers, were all around us now with their straight-winged petrel flight. Looking down on them, they remind me always of owls. A white-bellied cormorant (South Georgia Blue-eyed Shag) flew steadily level with the wing of the bridge. We could have leant out and touched him.

The chart showed deep water right in to land, and the Mate pointed out the incredibly long, fine trailing strands of seaweed that show on the surface even in forty fathoms; a godsend to a ship navigating in thick fog and feeling for the shore as the whale-catchers sometimes have to do.

Creeping in now to the anchorage at Leith Harbour, the snore station built near the outlet bed of an old glacier. Giant petrels, 'stinkers' to the whalers, scavenging round a dead whale moored waiting its turn for cutting up, had the greatest difficulty in rising off the water. This is a failing shared with our Fulmars of the northern hemisphere, but these great petrels must have been the worst ever. Dirty engine oil lay in streaks everywhere over the surface waters of this sheltered harbour, while smoke and steam rose from a huddle of factory shacks and old piers. Store barns, residential huts and rambling attempts at better houses were scattered on the hill above that was bare except for tussac and moss clumps between stone outcrops.

Closer in now—a flensing slipway with blood seeping down to the water; lumps of red meat and the remains of great flukes. Another Giant petrel waddling across this timber flensing staging like an old brown goose, wings up to keep his balance. The Cap doos with an incessant chucker-ing at each other, pattered in the blood-stained water for the globules, their little feet paddling hard all the time to

form a current past their pouched beaks sieving it up.

Not a pleasant shoreline this; old pipes, ship propellers, chains and scrap lay on the oil-covered stones. The whole was explained as a makeshift resulting from the obliteration of the original station by an avalanche of rock and snow, but that had been many years ago. A landlocked harbour with a backdrop of scree and precipices where the wind played mournful tunes, and so often shrieked in its freezing cold as it swirled out across Leith Harbour Glacier above the dangerous crevasses that at times held such beautiful, translucent, blue colourings in the solid ice walls:—to continue its career up the deep snow slopes of Mount Caronda and take the fine powdery snow from the summit out into space like smoke from a volcano against the blue sky.

Stretching away south-west and toward the west lay the three thousand-foot mass of the West Allardyce range. No great peaks like Mount Paget, but a tortured ice mass falling away in glaciers to the bays. Yet thirty years before in 1916, over thirty miles of these storm-swept heights after one of the most gruelling small-boat journeys on record, Shackleton had battled his way with Worsley and Crean from King Haakon Bay on the south-west coast of the island. In the end to reach Stromness close to where we were now, to get help for his men on Elephant Island eight hundred sea miles away. Had his exploration ship *Endurance* lived to accomplish her original mission she could hardly have made greater history.

We tied up to an oil-soaked wharf. For the piglets the voyage was over and they were really piglets no longer. It now took two men to lift one, instead of the initiation ceremony of one man to two piglets. But in the manner of their departure hangeth a tale with a moral. Another tail should have hung in shame, but it just didn't.—One week out of Santa Cruz these little porkers had grown so big that there was no longer any room for them all in their house.

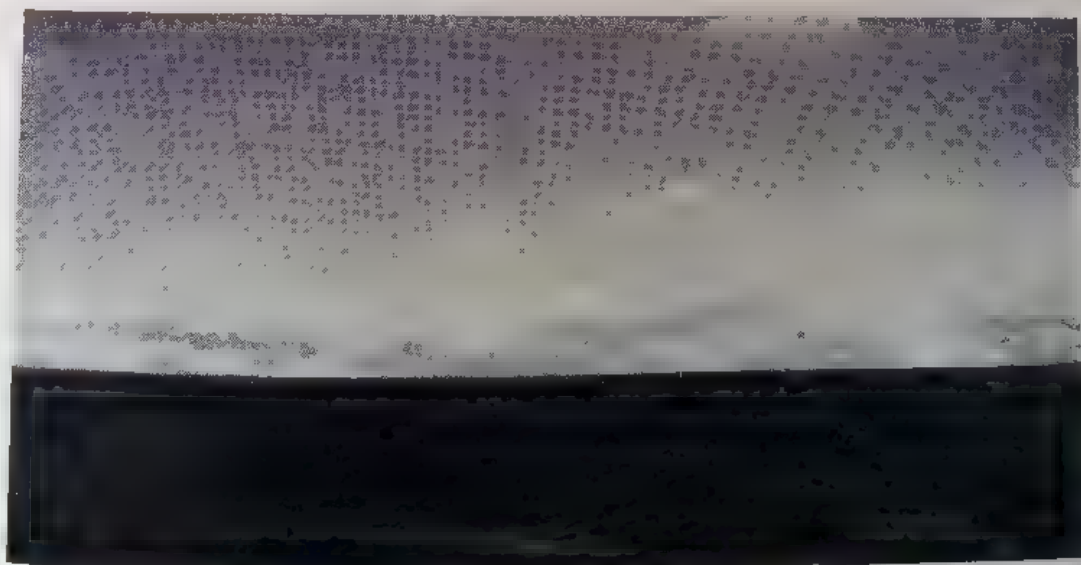
PLATE I



'Hello there Piggies! Welcome to our South Seas.'—Our Albatross escort.

Wingspan—more than ten feet.

Meanwhile the Piglets were 'dieting'.

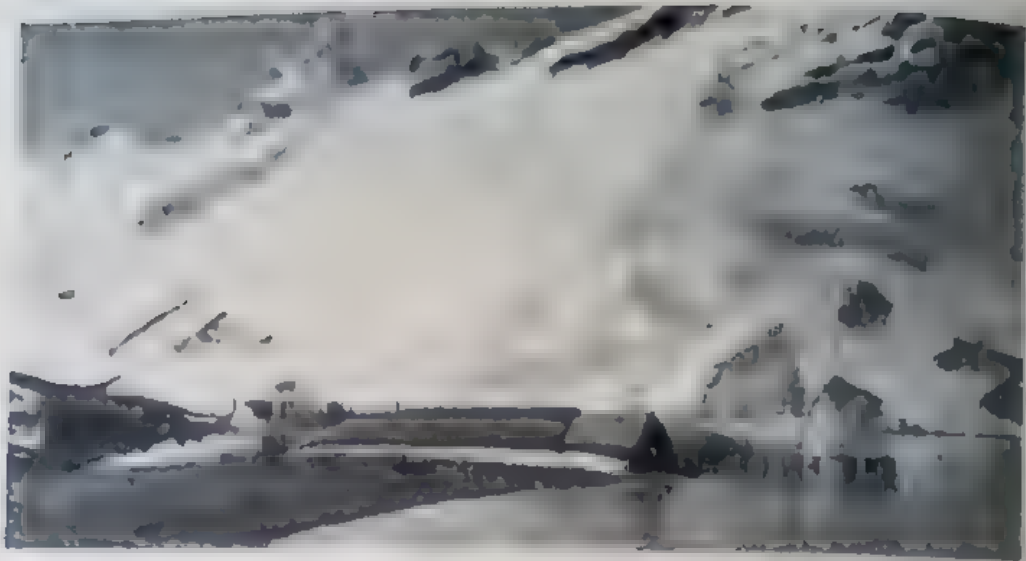


Out of a bank of cloud on a hazy horizon—South Georgia.

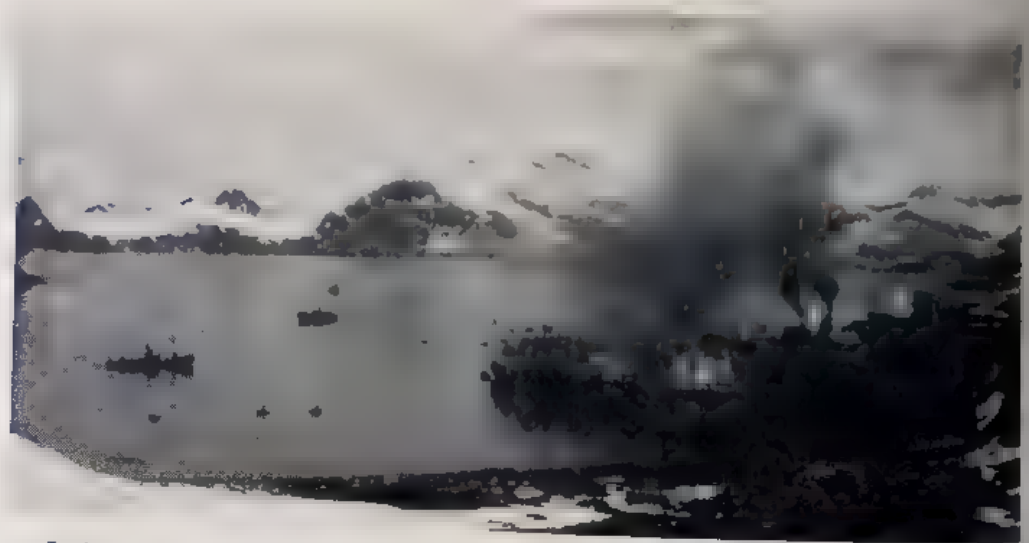


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Leith Harbour with the peak of Caronda behind.



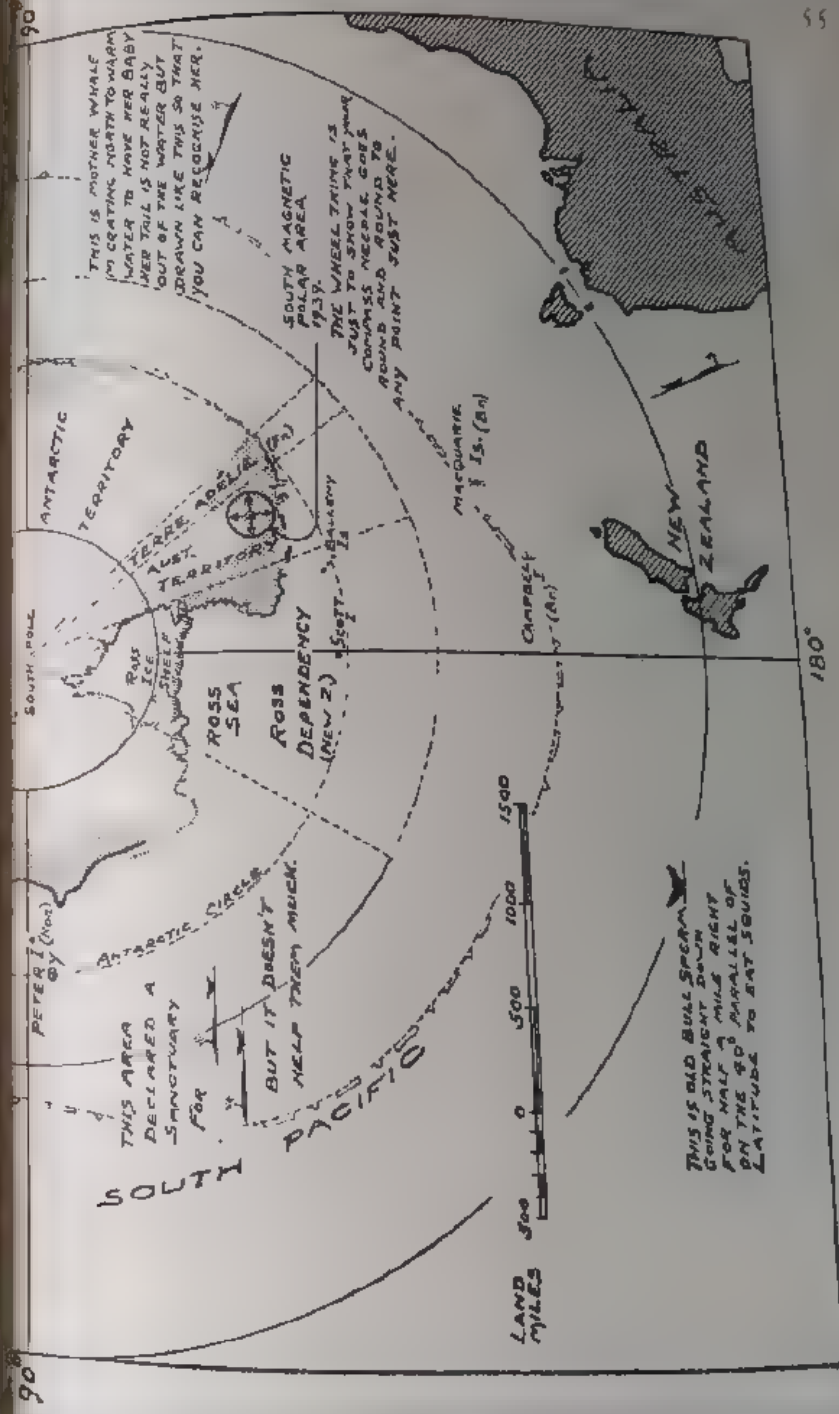
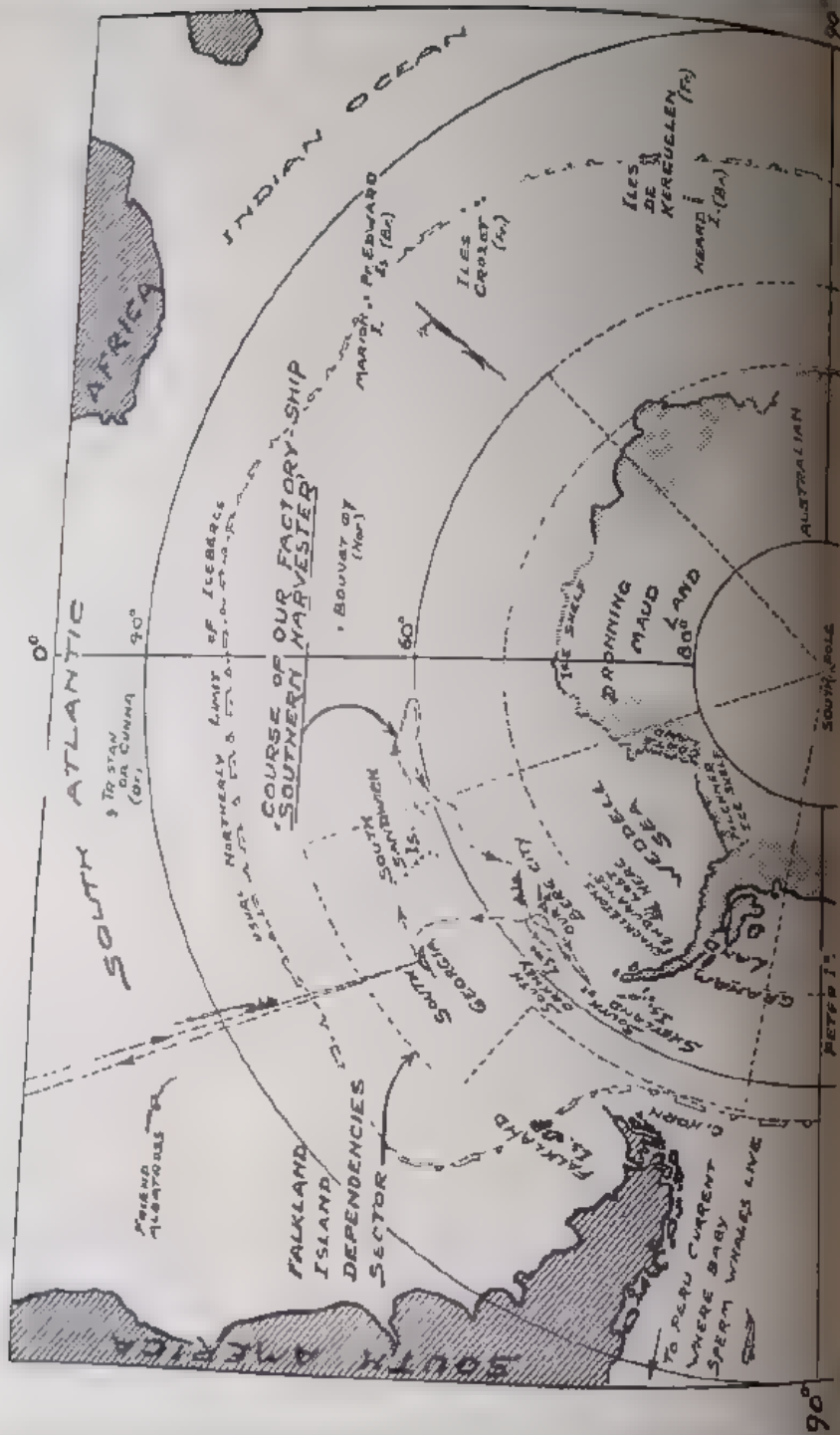
Leith Harbour from below Mt. Caronda. *Harvester* at her berth.

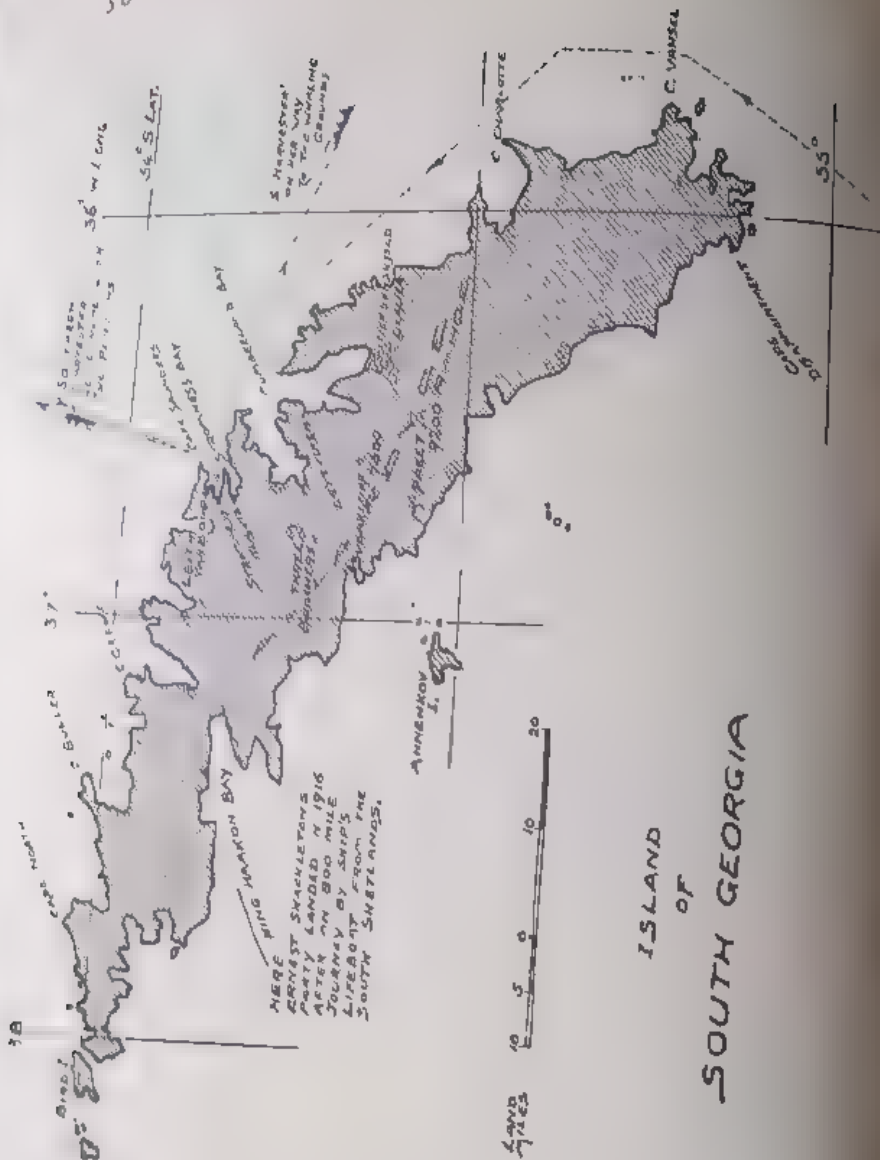


The 'Cap doos' pattered in the blood-stained water.

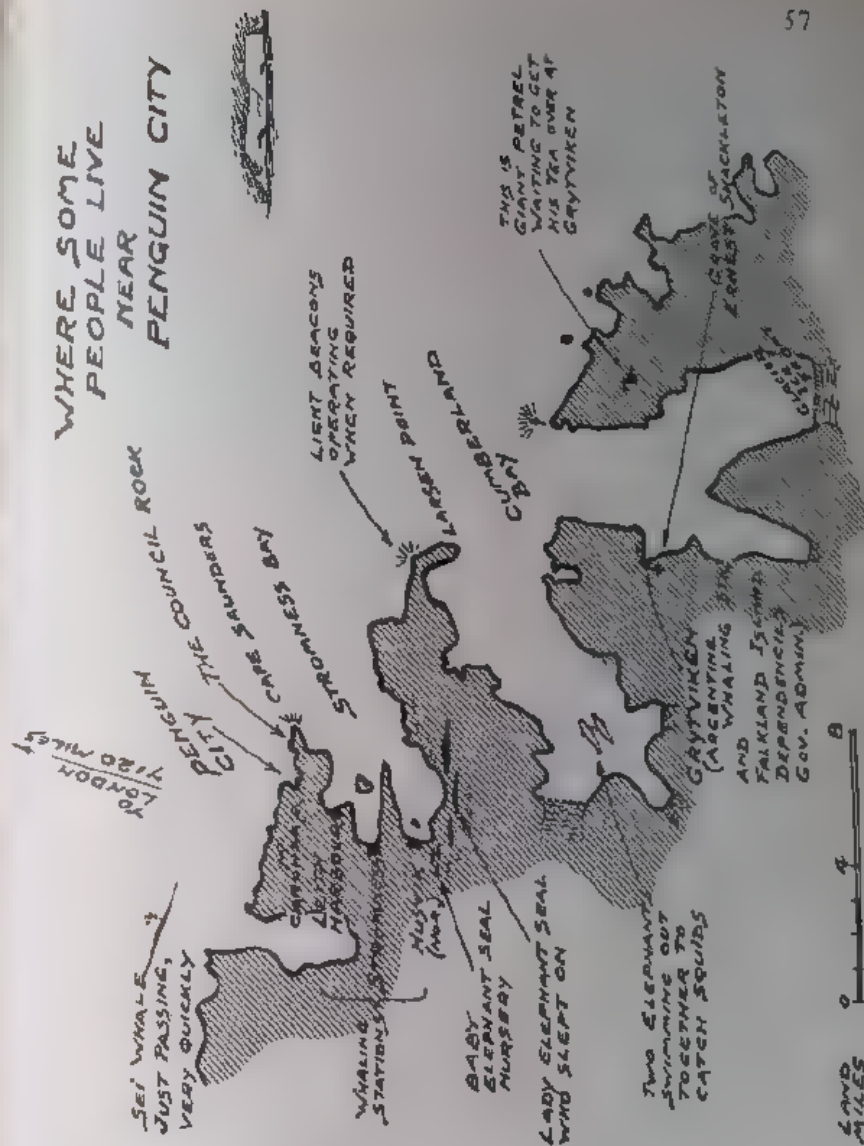
That was all right in the tropics when nobody wanted to go indoors anyway. But as the nights got colder, the demand for hotel accommodation got greater and greater until it could just not be satisfied and last-comers had to remain outside. But one little pig that didn't like being left outside happened to have eaten so much, so often, that he went off his legs. Poor little chap, he had our sympathy in his affliction and was put into an improvised piglet hospital next to the hotel, with warm straw and a nice roof, all to keep him from being knocked about by the other strong, healthy people. There he fed on a reduced ration of orange and banana skins, bread and other delicacies that he could manage lying on his side. He continued to grow steadily and was washed with the others and given all extra hospital care, but still he never could put his weight on his legs even with gentle human assistance.

Then came South Georgia and all the pigs going ashore to fine, warm houses—and straight on their heels trotted the patient without a stumble. We could have knocked him on the head there and then. He must have exercised his legs during the night when nobody was around, and turned on the poor piggy business as soon as the gullible humans appeared in the morning. And could that have been just a little smirk I got as he passed me? Am I quite certain it was not a little girl pig? Well, now you come to mention it . . .





WHERE SOME
PEOPLE LIVE
NEAR
PENGUIN CITY



Chapter Four

Penguin City



Like super speed porpoises they were tearing back from fishing.

Thus grew the tale of Wonderland:
Thus slowly, one by one,
Its quaint events were hammered out—
And now the tale is done,
And home we steer, a merry crew,
Beneath the setting sun.

LEWIS CARROLL

Penguin City

A WEEK in harbour to get everything ready: the catcher crews to take over their vessels. Factory hands who had been left in South Georgia through the past winter would join us. Part of the fuel oil taken on at Santa Cruz would be pumped into storage tanks ashore, and our own catchers had to have bunkers. It would certainly take a full week for everything that had to be done, but in spite of our engine troubles we had made good time and our sister ship *Southern Venturer* had not yet arrived. At breakfast the morning after we got in, Captain Begg with his quiet smile felt that things were working out not so badly.

'Doc, we've got to collect penguin eggs to help out the rations.—Aye, I thought you would jump at that.'

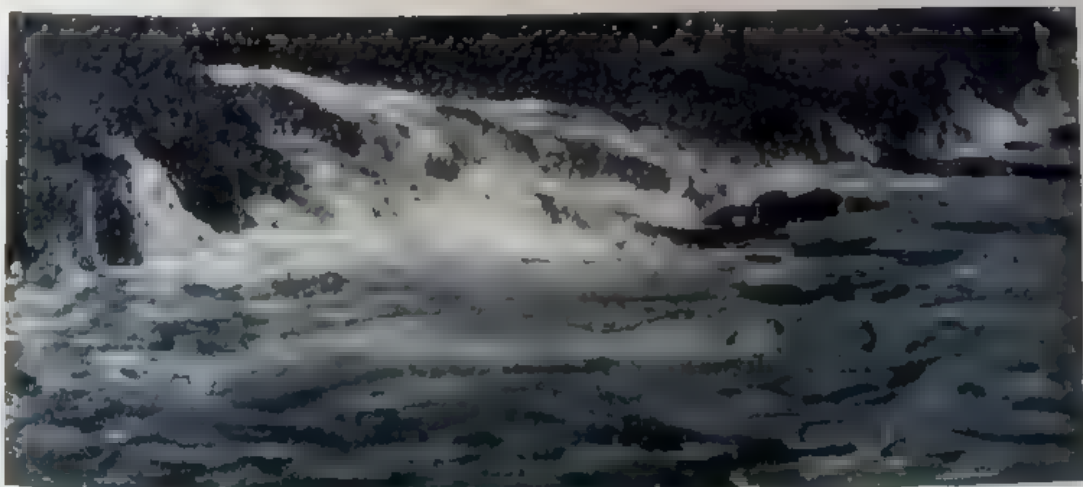
It was enough for me; the medical work would be planned accordingly.

A clear dawn and beautiful sunrise as the catcher *Southern Foam* with her Norwegian gunner skipper, Jorgen Abrahamson, left the whaling-station smells behind, and, rounding Cape Saunders, held on westerly, close to the steep, rugged coast, to locate the 'rookery' of the Macaroni penguins (*Eudyptes chrysolophus*) the only species breeding in large numbers close to Leith Harbour. The name Macaroni perhaps associated with the 'Yanky Doodle' ditty and the trailing tuft of brilliant orange and yellow crest feathers running back from the forehead above each eye. But to the whalers they are just the 'Rockies', vying with their kindred species, the Chinstrap or Ringed penguins and the Adélies, for the comedians' championship of the Antarctic; although the name Rocky should perhaps be more correctly applied

PLATE 3



A corner of Penguin City.



A beautiful little ten-foot body slid to the surface among the sun-flecked ripples—Sea Leopard.



Pirate in the bay.



Always time for a gossip.



It's been a lovely day hasn't it?—The Kristiansen Twins.

to the Rock Hopper penguin (*Eudyptes cristatus*) that breeds elsewhere. Like all comedians, they could be so pathetic.

The first bay was unoccupied except for two swimming cormorants. The next was the same, but we stopped the engines to listen. A skua flew overhead and two Dominican gulls were having a quiet conversation away in at the rocks. Then from out on our starboard beam came two plops as of fish jumping—quietness again. Closer to the boat three little dark bodies shot out of the water like baby porpoises, and had disappeared before we could say—Penguins!—Then up and gone again fifty yards ahead, going the same way as we were.

Far out to sea were more tiny dots that flashed into sight and under again.—The engine-room telegraph rang, and in the calm water the swish of the bow wave prevented us hearing much else.

The next bay we did not investigate, as our little pilots seemed to be still farther out, but rounding another headland, the engines were stopped again. A great semicircular shore-line with gentle slopes of thick tussac along the eastern headland we had just passed, but inland towards the head of the bay the ground rose steeply and more steeply through scattered snow patches up and up until almost precipitous over the last few hundred feet to the thousand foot crest, then sweeping round the bay and down to a low western headland.

From everywhere over this gigantic grandstand came waves of sound as from the multitudes at a far-off human football match. From our distance it looked a bare, lifeless mountainside, but this impression got no backing from our immediate surroundings. We were right in the busiest of traffic lanes. I thought for a moment of the bees in the heather in Orkney, their preoccupation was evident enough, but this was just beyond everything. Penguins dashing out to the fishing like super-speed porpoises; penguins tearing back from fishing trips, not one with a second to

spare to pay the slightest bit of attention to us. 'Hey! you folks, half a minute.'—Not a bit of good, a photograph was the last thing they had time to pose for. If we had been of shrimp-like form and had a classy name like *Euphausia* we would possibly have got some attention, if only to be lugged home and perhaps end up down the throats of the girls sitting on their solitary eggs up there somewhere in that distant noise.

Slowly the catcher nosed her way in, ready to go full astern at the slightest hint of sunken rocks seen from the lookout barrel. Gradually, myriads of tiny white dots could be distinguished, the little shirt fronts of the citizens themselves, three, four, five hundred feet up, and still more above; and right round the bay. A strong, goatly smell was wafted over to us, while the 'Ca-ca-caaaing' from one side rose to a crescendo until you almost felt the air vibrating, before it died down only to be taken up by the other side of the bay. Three hundred yards out from where the swell rose and fell in cascades from the lower rocks, our anchor chain rattled out in a cloud of scale dust. The small boat was got over the side, and egg buckets and lunch-box for six men stowed.

As we came in toward the rocks and the belt of weed, a great, lithe ten-foot body slid to the surface beside us, then under the boat and up again almost with the suppleness of an otter. Leopard seal, perhaps the finest swimmer of all the world's seals and more feared by the penguins than the Killer whales are. I was fortunate in having the camera at the ready, and he posed for one brief second among the morning-sun-flecked ripples.

Little groups of the Rockies were coming and going between the rookery and the sea all the time, particularly from a broad, shelving ramp of flat rocks at the east corner of the bay. Leopard must have had an easy meal whenever he felt like it. He was a beautiful animal, and that long, graceful snout hid a set of the most powerful, efficient fangs.

But now, like nearly all undomesticated carnivorous creatures, when not hungry, there was no thought of killing in his mind. He just wanted to play around and watch everyone else being happy too. Had we known him better and the water had been more reasonable in temperature, I believe we could have gone in with him and had a wonderful time.

There was just a two-foot rise and fall of the swell, but the rocks were slippery, and getting ashore was tricky: 'Jump next time'—'Now you, Magnus'—'Catch these buckets'—'Clear with the boat now—we'll see you later.'

Rugged tussac grass tumps with ditches in between, worn down by generations of penguins, are not too easy going on a steep hillside, especially with an egg pail on one arm, when you have to be careful not to tread on the little feet of the penguins, who have no intention of keeping out of the way and are doing their small best to tug wedges of skin and flesh out of your lower limbs. Brave wee folk hardly up to a man's knee, but full of grit in attacking this great marauding human thing that to them looks like a big, scraggy penguin.

'Careful with those big sea-boots, boys; be careful of their little feet. They don't know to get out of the way; most of them have never seen a man before.'

Johnny Clouston, an Orcadian and one of our catcher hands, came up with half a pail of eggs and trouble on his brows.

'Doc, I'll throw that bloody wireless operator into the sea if I ever see him do again what he did just now over there. A Rocky stood up to him and refused to budge off its egg. He put his foot under it and lifted it over the cliff to kill itself on the rocks down there. I told him what I thought of him, but by all the gods I'll kill the bastard next time.'

'Good boy, Johnny. Watch him, but he'll probably not do anything like that again. We'll have it out at lunch-time; but tell the lads where you are not to try to take the eggs from penguins that want to keep them. It's a waste of time,

anyway, when there are so many eggs all over the place that don't appear to have any owners. Take the eggs nobody wants.'

'Nobody? You mean penguins?' Nils Kristiansen, the lenser, sat on a boulder scratching his head, with two Rockies at his back solemnly contemplating the seat of his pants. 'Jo, they are somebodies all right, my pore legs.'

'Well, Nils, you and I are the only ones without sea-boots, but I'd rather be bitten than scramble over this place with anything heavier on my feet.'—Pulling up my trouser legs, I found three neat little skin wedges removed, with a trail of clotted blood below each.—I looked up to see the nearest of Nils' attendant penguins take a bit more than a contemplative nibble at the part of his pants they had been surveying. Nils removed the object of their attention so fast that he sat down in the mixture of mud and snow where his feet had been, and scrambled up to face two little innocents eyeing him gravely with their heads tilted just slightly to one side. Then quite brazenly the one nibbled the beak of the perpetrator: 'Yes, that was funny, darling, and I'm sure they are really quite harmless.'

Nils put his hands on the rock and leant forward: 'You little somebodies—you—you—Penguins, you.'

He made to get hold of them to give a more heart-to-heart talk, but they retreated, heads in the air, and scrambled up on to a tussac clump. I was so overcome that I had forgotten all about the camera, but this was too good to miss and I prepared to take their picture. As soon as these two comedians saw the lens, they turned on the professional mannequin touch immediately. They of course became 'The Kristiansen Twins', and allowed us to gently stroke the backs of their necks before leaving them to themselves, and probably the hatching of more devilment as well as an egg.

The pails were filling rapidly and Nils went down with a load to where the boat would come in again while I continued on to the east headland to try to get a general view

PLATE 5



The Rypes looked so innocent. One is hiding behind the egg bucket.



This little Lady was very proud of her egg, so of course we couldn't take that one.

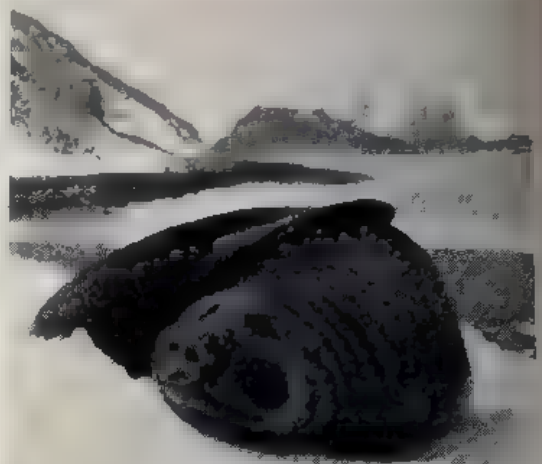


Look your best now, my dear. Here's that Camera Man again.

The departure of the
Pirates. Our rescued
Penguin in the fore-
ground.



AND NOT VERY FAR DISTANT



'Now please go away. You bore me.'

A co-operative boy seal at the whaling
station.—'How's that, sir?'

The elephant seals at Stromness

for a record of the number of penguins. The first layers are rather larger than those of ducks and vary in colour from pale brown to creamy white. Where they are laid doesn't seem to matter much, on gravelly shore, on snow patches, or on the rocks where snow has melted to porridge with mud from the traffic of many little feet. I found it in the circumstances a penguin incubates her own egg all the time. There are probably frequent mix ups and then: 'Oh, well, we're all in the business together and one egg is as good as another.' Some of these with really attentive ideas of what is to be, what would come out of their very own eggs, had migrated further up the slopes into the tundra away from the rookery cement and the mud, where they could have a tiny patch of grass between them and the fox next year.

After more attacks, I sat down to rub 'my poor legs', as N. called them. At once the menace of my height and clumsy movements was gone and they dropped their aggressive protests. After half a minute's head-on-examination, they ceased having any interest and just went gazing out to sea or having the usual slight difference of opinion with whoever was nearest.

I stretched my legs out in front of me, whereupon two penguins jumped on to them as a vantage-point. I was now of no more account than a bit of dirty old tussock not even good enough for laying an egg on. I felt suddenly lonely and out of it—ignored. I glanced at the beautiful girl standing at my right elbow with the neat, wispy yellow feathers in her hair, and thought—if only she had a garland of timorous and ginger flowers she would do one of the Hula dances for me. I moved and put a finger on the back of her neck, but she turned and gave me three hefty wallops with her flipper: 'You keep your hands to yourself'—and resumed her seaward gazing, with occasional glances up toward the noise coming from the upper slopes of Saptolsa.

My action had nearly upset the two people on my legs.

but they took my apology as a matter of course. I did feel lonely and a dreadful inferiority complex began to develop. *Southern Foam* was out there in the bay, and here was I amongst a race of superior beings to whom a man was just a piece of useless rubbish from a stupid, far-away place called civilisation. I tried to put on the scientist business and look at my surroundings as though they were just an everyday occurrence. But could it possibly be that I was on the same planet now as contained the teeming cities of humans, where the populace made noises just as loudly as the people of this penguin metropolis only perhaps not so intelligently? I could see the citizens here right up to five hundred feet above the sea. Human feet or penguin feet?—Well my own boot was a foot long. I looked at the penguins' feet; fine, chubby, little, grey, scaly feet. But would mere humans understand if I measured things in penguins' feet? No; it would have to be human feet after all.

Ponting, on Scott's last expedition, recorded Adélie penguins nesting more than a thousand feet up at Cape Adare. Now, this was a poser; how long would it take the top little folk to walk down the mountainside, go fishing and return to the homestead again even five hundred feet up? Could they make three trips in a day, getting pecked by every nesting stranger they pass, and still have time for a little fun on the way? Well, perhaps: all right with only the wife to relieve, but once the infant was hatched, life was going to be a misery of hard labour for a long time.

I cut a narrow slit in a piece of paper to look through as a strip field of vision. Sighting it by its own width of field in sections round the bay, then counting the penguins in a fraction of the height of the strips. The estimates of that total population varied from fifty thousand to double that, but when I compare the photographs with what our Cup Final crowds look like, somewhere about the lower figure may not be far out.

Close to the slope where I sat was a large, unbroken

expanse of snow continuing down toward the shelving landing rocks, where two seals, apparently Weddells, lay like slugs in the sun. On the rocks beside the seals, little parties of penguins were coming and going, and some apparently resting before the final tramp up home. Each party going out would remain a minute or two at the water's edge before jumping in, probably to make sure Leopard was still out of the way.

Suddenly a violent squabble started above me to the left, the parties obviously determined to settle it this time once and for all. They went at each other beak and flipper, until, landing on the slippery snow surface, lost their balance and shot off on a career downhill still locked together. They paid no heed to where they were going, the one on top pecking mercilessly at the other as they passed me. Down, down until they skidded off their toboggan run far below into tussac, mud and stones. Nobody other than myself paid any attention whatever.

Then the latest party home from the sea came wandering up the edge of the snow slope. A few deliberate steps, then a wee heads down gossip—a few more steps—another gossip. Bit by bit they made the laborious way upwards as the affairs of the day were discussed—how they fooled that Leopard person, and the scandal of these humans with their monkey fingers stealing the hard laid eggs from the poor souls down below. Yes, how lucky they were to be living high up where the thieving things couldn't climb—if only one's husband didn't make the long hill the excuse for staying out so late at the fishing.

Overhead quartered an occasional brown Antarctic skua; as far as I could see identical with the Bonxie of the Shetlands. But if it was eggs they were after they were given no chance to land. The Rypes or Sheathbills, those white, curiously tame birds like half-grown barnyard fowls and pigeon-like in flight, walked innocently among the penguins ready to make a hole in any unguarded egg. Yet although the

penguins would make passes at them they never seemed to really resent their presence. When a couple of Rypes came to investigate the eggs I had gathered I threw snowballs at them. This was a new game and they just hid behind the bucket.

My Hula girl friend still stood beside me in spite of my having been so fresh with her, and just above us a honeymoon couple were eyeing a fine clump of tussac on top of a two-foot pillar of earth smooth and impacted by the yearly jostling of many little bodies. The first penguin made a valiant effort to scramble up after a jump landed him flippers on top but feet paddling in the air. His mate, instead of putting her head under his feet, just stood and enjoyed his antics until he began to slip and—plump—into the mud to mess up all his white shirt. It was her own fault that he went for her and gave her a good hiding. That completed, on they went further up to prospect for a not so high nesting spot. But there was not much room left.

Another half-dozen buckets of eggs to the three of us in our area, and still we seemed to have made little impression on the numbers. There was time for some photographs before lunch.

I set the folding Kodak in position on its tripod, leaving it while I checked the exposure. At this new contraption, penguin curiosity was thoroughly aroused. They stood gazing up at the lens—then a tremendous discussion, followed by another inspection, reaching up on their toes to see better. More behind crowded the first ones closer.—What funny octopus-like thing could this be?—They had visited the octopus people amongst the rocks, and the very little ones were good to eat, but they had never seen one standing on its legs on dry land, and with only one eye too. The pressure from behind increased until those in front were pushed below the tripod. Oh, these dear little funny people. I watched now; it was only a matter of a few moments before something happened. The ones underneath

was to get back out and one tripod leg was lifted on some-
thing solid and with the push on the other side over went
the whole thing. But there was such a crowd round that the
camera could not reach the ground and landed on a soft back
and nobody cared.

To make things more secure, I spread the legs out more,
and the camera nearer the ground. Little did I know what I
was getting myself in for. Kneeling in the snow was now the
best way to manipulate things, but without even a gentle
warning, there came a concentrated attack on the
back of my pants.—My howl was a lusty one, a most satis-
fying noise from the point of view of these brats. One of
them I knew at once had a wedge of skin, and tug and tug
and tug until something gave way. I knew then too that what
had come away was not a bit of the anatomy of that little
brat. I was sore; it was most damnably sore and I left the
camera with anything but dignity and sat down in the
deepest bit of snow I could find, hoping the freezing
anesthesia would be speedy.

When I looked round, of course the whole audience was a
picture of the utmost innocence. Gingerly, through a rent
in the ice creeps. I found a corner of shirt—bloodstained. I
did not admit defeat by this mob. But in spite of the pain in
my behind they were such a lovable bunch. I caught one
and held him so that he couldn't pummel me with those
fingers, and could only marvel at the tiny, close-packed,
stiff feathers that gave him his teddy bear coat, and the
gleam of his ruby eyes as he eyed me. A little person, like all his
kind, surely made in the image of his Creator. I took out a
pair of scissors and gently snicked off one or two of his crest
feathers as a keepsake, but not enough to spoil his looks and
make his lady friends not want to go out with him until
they grew again. Then I set him down, and with my lower
anatomy no longer as sensitive as it was, took off my jacket
and, tying it by the arms round my waist to give extra
rearguard, managed to get on with the pictures.

Lunch-time; I went down to where the rest of the party had brought ashore a big pot of piping hot tea from the catcher. Hunks of bread and butter and jam that were welcome indeed. It was great fun, of course, to know that the doctor had had a bit taken out of his sensitive anatomy by a penguin. Close by, a Dominican gull had a nest of fluffy babies on top of a rock and they must have had more attention than baby gulls ever got before in the Antarctic. The penguin young would not hatch for some weeks, as the eggs were freshly laid.

We discussed the hurting of our small friends. These whalers were genuinely fond of them, and we felt more than a little, just what thieves we were, taking advantage. The wireless operator was, I think, pretty well ashamed of what he had done when we first landed. Thoughtlessness, lack of imagination, and so often a complex of inferiority have a lot to do with that sort of thing. Those who inflict cruelty too are so often those who cannot stand pain themselves. And in our modern ideas of being clever with our scientific inventions we have lost touch with life. We know the price we as humans put on things, but rarely do we know the value of the things themselves.

Here through the years the penguins have their brief squabbles in the rookeries, but always reach agreement in the end. And while this man animal is busy being successful and making his fellow creatures miserable in the process, the creatures of the 'Great White South' go their way through life in happiness through unselfishness. When man at last reaches true humility, having explored the stars, he will realise that to look at a snow crystal through a microscope is as great a conquest as any.

I decided to go over for a closer look at the seals; but scrambling down below the gull's nest I suddenly came on a narrow deep cleft in the rocks. At the bottom were the bodies of a dozen dead penguins, and one very much alive struggling penguin jammed in on top of them. Was this a place

ney had accidentally fallen into, or did dying birds deliberately jump down to get away from being tormented by their own kind, and rather than swim out to sea? Yet if it had been burial place there would surely have been many more than ten bodies. In all that great rookery I saw not one other or even injured penguin anywhere. Where did they not out to sea? Dr. R. C. Murphy of the American Museum of Natural History relates how on an island at Georgia where there was a large penguin colony, he found a small, clear lake on top of a hill some distance from the sea. Round the lake stood several sick or injured penguins and further investigation showed the bottom of the lake covered with dead birds.

Dan, one of the bridge officers of *Harvester* who was with me, picked out struggling penguin out by the beak. She was not very and not at all threatening to die. It seemed to me that she got in by accident. I took her in my arms to carry her down to the water to see her swim away, but on the way down the living rocks I slipped on the seaweed and she seized the opportunity to get me by the ear—Gratitude. I threw her in, and she dove at once, heading past where the rest of the colony were. After lunch, and came out on the rocks. Later I went down to get a picture of the loading of the eggs into the boat, when she chose just that time to walk up the steep bank into the foreground looking quite ashamed of her behavior. Or yes, I know the factory-ship piglet might have been a boy, but I just know this was a girl penguin. After three thousand eggs gathered after lunch and the sun was a r shadews began to lengthen in the western sky. Time for a quiet pipe alone with these birds. The birds has a viable peep e quarreling just a little, a good deal of making love and quiet contemplation. Until someone passes too close to you and the egg has to be put in his place. This funny man thing has got smoke coming from his beak now, but he's sitting down quietly, which is just as well considering his

clumsiness. Listen to the dreadful noise these West Bay people are making; and what has this honeymoon couple got to bawl about? Oh well we might as well join in too—
Aaaa-aa-aa-aa-aa-aaaaa . . .

It died away again—Just how much of all this was I dreaming? It couldn't possibly be real. Would pinching myself let me know if I was awake? That wasn't at all necessary; the smarting in my legs and posterior was real enough. But if Alice had suddenly come skipping down the hillside and said: 'Oh! excuse me, but I'm looking for White Rabbit and it's so very difficult to see him in the snow,' I would not have been one bit surprised and just scrambled to my feet: 'I quite understand, my dear, but I should think it is equally difficult to see White Rabbit when he is not in the snow because there are so many people round here with white shirt fronts, but——'

There was a gentle little tug at my elbow and I turned to find two of the white shirt-fronts standing close together.

'Here we are, you funny thing; what are you going to do next? Are you going to stay with us?'

'Oh you lovable pets; I don't honestly know who I am. I thought I did, but since meeting you all it's so different. I think I have come from amongst what are called humans, and we are breeding too fast and have no Leopard seals to keep our numbers down. It's a pity, for it would be a much better world if Leopards ate humans instead of penguins. So away in far-off land places, where you mustn't ever go, dears, man is just making a mess of everything. He gathers stuff called money into big heaps and kills his fellow humans and other animals to get more of it; and all because he thinks he is better than other people and it is the only way to convince these others of it. Now he has killed so many of the sea creatures near where he comes from, that there aren't many left to kill; so he has come down to where you live here to destroy your friends the whales, too. And he can't lay eggs himself, so he steals yours.'—The ruby eyes seem to be

taking it all in and you feel you ought to take them up on your knee, but they aren't very keen about that.

'Well, we don't mind a few eggs really, 'cos it's fun making more, although the first ones are the best. But, please, we do like our big whale friends. You will try and make humans stop hurting them, won't you? The bad Orcas eat us if we don't dodge them fast enough, but we do so love Fin Whale, and big Bluey, and Humpy is such fun. Sei Whale is nice, too, but we don't see much of him because he is always in such a hurry to be going somewhere. They are all so kind to us and tell us where the bad Orcas are.'

'I'll do all I can for your friends, little people.'—Dear oh! but you do make me feel anything but proud of being a human.

'Goodbye now, and bless you both and all your small friends here. And if you are sure it is all right this time, I'll take those buckets of eggs with me.'

I thought I heard *Foam's* siren, above a babel of penguin noises, and when I looked up there was a jet of steam from her funnel. Her whistle could hardly penetrate that chorus. My two friends had scrambled up on a tussac clump and I took a last portrait of them: 'Goodbye, little folk. I'll remember what you said.'

Down over stones, grass and snow patches, treading carefully to let the people give room for the buckets to pass. But I trod just a bit on one little foot and had to lay down my load and hold him for a minute to see it was all right. At the brow of the next hillock I looked back. They were still on the tussac clump and their friends crowding round to hear what it had all been about. I knew then I had taken on a sacred mission. They had such trust; and the faith of a little penguin is such a fine, precious thing.

'Everyone here? Righto, boys. Watch that teapot doesn't fall on those eggs.'

Leopard was nowhere to be seen as we pushed off. The anchor was already stowed as we reached the catcher.

The engine-room telegraph rang.—I think I felt more lonely that moment than ever before in my life.

The goaty smell began to lessen, and the tiny shirt fronts faded; but the murmur of little voices for me would be calling across the snow patches and tussac clumps of time.

Chapter Five

Elephant Beach



This is Big Boss Elephant seal a bit annoyed, and saying just what he thinks about being disturbed. The thing like a cooking pot is a whale vertebra with bits of whale ribs beside it.

Anon to sudden silence won,
In fancy they pursue
The dream-child moving through a land
Of wonders wild and new,
In friendly chat with bird or beast—
And half believe it true.

LEWIS CARROLL

Elephant Beach

A CATCHER's deck sweeps down steeply from the high bows to very little freeboard aft, and with open rails like a destroyer to let the seas roll on and off as she turns in chasing a whale. At twelve knots, on our way back from Penguin City as I stood toward the stern, the return bow wave even on that calm evening was over the deck plates and lapping round my feet. Laughter came from the galley below the bridge, where the boys were at their supper, as we left a long, shimmering trail behind us into the western glow. Then Leith Harbour, lights on the water and the smells of man.

Next morning Arthur Eliasson was assisting in the welding of one of the factory-ship storage tanks, when gases inside detonated. He was right in the line of the blast, but managed to reach the ship's hospital on his own feet, a dripping mess of oil, unable to see, and his hair nicely removed. A clean-up showed his face heavily tattooed with embedded carbon particles, but the eye damage would not be permanent. He was a wonderful patient; lay for two weeks without seeing anything and talked right along all the time, about whaling, about Norway and almost every other subject. He never complained, and the morale of the hospital ward was never so high as when Arthur was our star inmate. I was sorry to have to get him back to duty in just over a month.

Still a few days before leaving for the whaling grounds, so I planned a Sunday visit with Captain Hemmings, our Government whaling inspector, to the Norwegian whaling station at Husvik, a five-mile tramp round the bays and over snow covered headlands.

The temperature was well down; crisp, clear air, the mountains sharp against a cloudless blue. Just a tiny wisp trailing from the peak of Mount Paget. Mosses showed active growth at our feet and down on the rocks the Dominican gulls wandered around. They are so very like our Lesser Black Backs of the north, but always seem so much quieter as they go about their explorations. From the crest of the first headland, Leith Harbour lay down behind us. No smell up here, and right ahead the grandeur of the Allardyce Range. Even on this calm day it seemed incredible that Shackleton's party could have tramped in their worn, tattered clothing across those heights. Men almost in rags, writing history with guts. The once-busy sheds and works of Stromness lay down there at the far end of a sweep of sandy beach at the head of the bay in front of us; now just a repair station with a small dry dock for catchers. From the very back of the buildings rose to the south a great mountain massif, while the head of the bay continued up into an old glacier valley.

Descending toward that beach was like entering an empty theatre after a great play had been enacted. A large, rounded boulder ahead turned into a cow Elephant seal lying on her side too sleepy to take more than a glimpse of us before going back to her dreams again. I had to go up and say the most insulting things before she would even look at the camera. Farther along the beach lay the bleached skeletons of elephants which had probably been killed the previous year, although Stromness Bay is a reserve where the law decrees that the seals shall not be harmed. They are taken for the oil that can be extracted mainly from the thick blubber below the skin; the skin itself having been of little value in the past.

This sealing industry controlled by the Falkland Islands Government has been an example of true conservation. For control, South Georgia is divided into four sectors, one sector each year in rotation maintained as a sanctuary where

the seals are not disturbed. In the remainder mainly older bulls are killed, while the cows and young generally are not molested. Last century British and American whaling companies had gone after the elephants and almost wiped them out. Only after that was legislation brought in to protect them. Left to themselves they recovered gradually, and killing was not properly resumed until about 1910. Under the present regulations, quotas between five and eight thousand are now taken each year. But although the numbers on South Georgia are collectively estimated as now quarter of a million (as near as can be judged considering the seal movement that goes on between there and other sub-Antarctic islands), there are indications that killing may be again excessive.*

At the whaling station another cow elephant lay beside one of the sheds, and with a little coaxing she was willing to say 'Ah——' in proper consulting-room style. Seals are so often ready to let you see if they have any tonsils if you are just reasonably patient with them. The elephant seal feeds mainly on cephalopods, such as squid, and probably octopus occasionally, and this girl's teeth were in beautiful condition for the job. She was ten feet long, which is a good size for a cow elephant. And such an obliging lass; she kept her mouth open until my camera clicked and then she subsided with a sigh:—'I hope that is all you want to-day.' A young male friend close by followed her example as soon as he was asked.

But commercialism had made a sad mess of things here too. The stony and boulder-strewn south shore of the bay had a dirty, sticky coating of tarry oil, apparently from the whale catchers. A pathetic trio of half-grown seals were black from nose to scudders, their eyes bloodshot with irritation. Further along on a rocky promontory stood one of our little penguins, hopelessly clogged, waiting pitifully for a slow death. Poor little devil, typical of the state of so

* F. D. Ommanney, in his book, *South Latitude* (Longmans, 1938), gives a very good account of his time with the sealers of Grytviken.

many wild creatures everywhere, victims of our eternal selfishness.

Surely dividends to shareholders is no excuse for not spending some of the wealth of the whaling industry in the prevention of a trail of misery.

If penguin was still there when we returned from Husvik, I would take him back with me to the ship and try to save him by cleaning with fat. The seals closed their poor sore eyes as we left them, to dream, I hoped, of lovely clean beaches where humans never come. As we tramped up through the snow of the next headland I wondered, would Kipling's White Seal be forever searching, searching, for that real sanctuary symbolic of man having at last realised his trust and obligations.

It was hard going in places without snowshoes, and we tramped out a single-file trail. Captain Hemmings, although retired from the Navy, was still in true naval physical condition. Over the top, and Husvik Bay lay ahead with its active whaling station sending up trails of smoke and steam.

Down toward the shore again where the snowfield came to an end, thick tussac was interspersed with fresh-water pools and boggy patches. A convenient boulder projected its smooth top in the middle of a bad bit of muddy water, and as I used it as a stepping stone it gave under my weight and came to life as a most indignant half-submerged young elephant seal. Nothing other than eruption describes his reaction, and as I sprawled on the tussac on the far side he splashed the muck over me and sat up with the most glaring: 'What the hell?'—I couldn't do anything other than look humbly at my feet and say: 'I'm sorry, sir.' He was a kind young seal and seemed to see that I really meant it, and settled down with a very resigned: 'Well, *do* be more careful next time'—so with what I hoped was a satisfactory 'Thank you,' I went on my way.

As I caught up with the Captain he disturbed a large

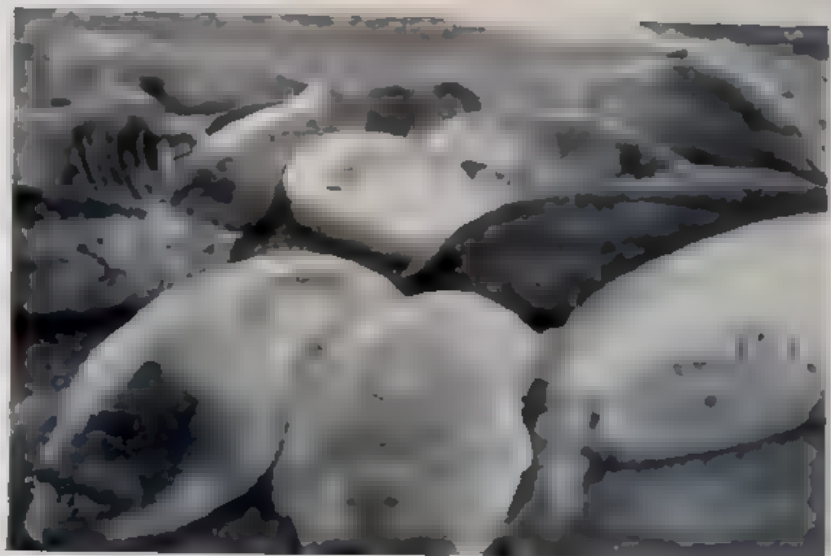
bull elephant with his harem of five cows. This gentleman must have been nearly twenty feet in length and a good three tons, and leaving his ladies he headed in great flounderings toward the sea. An attempt to head him off to get a photograph produced an exhibition of ferocity when he turned toward me with his inflated trunk nose in a state of agitation. But the instant I paused to sight the camera he was off to the water and with great splashing finally submerged in the weed, where he lay with just the top of his head showing, glaring at the shore. A beautiful dainty South Georgia teal, feeding close by, gazed fascinated at all this fun.

The whole foreshore within the last mile or so of the station was littered with the bones of whales. Jaws, ribs, vertebrae; bleached records of the days before international whaling laws made the utilisation of every part of the carcasses compulsory. Then in past the wooden factory sheds and plant to a wonderful Norwegian lunch with the station manager, an old friend of the Inspector. Afterwards, as they yarned over old times and friends, I set off to explore farther round the bay. We had got in just too late to see the herd of reindeer which had been introduced to the island some years previously from the far north. They had successfully adapted themselves and just the day before been grazing on nearby ground.

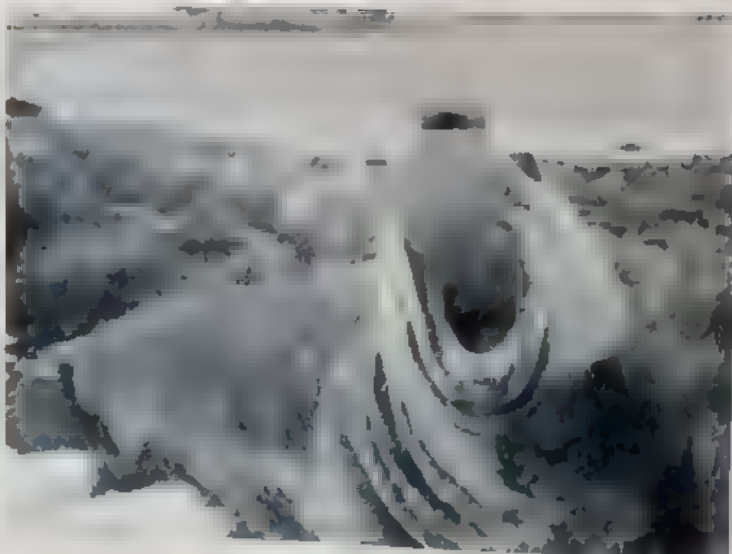
Along the beach beyond the station, some of the season's batch of elephant youngsters had founded a nursery of their own on a patch of moss and grass beside a clear-running stream. There these silvery catkin soft-coated babes the size of well-grown pigs dozed away the hours, too sleepy to respond to my eternal photographic requests. Until I stepped among them, when not many seconds after, my trousers, jacket and gloves required extensive repairs after attention from strong little jaws. And down in the stream a short distance away another youngster lay immersed flat on his back in the lovely fresh water. At first glance apparently drowned, but that front flipper would occasionally come up to gently



11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

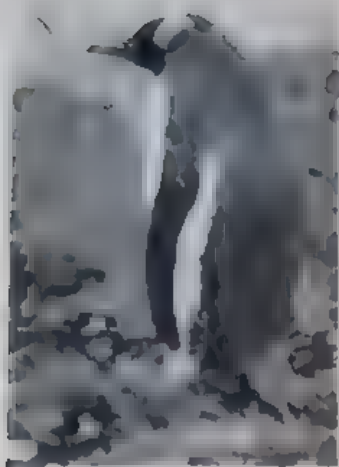


Silvery catkin
eared youngsters
snoozed in a
nursery of their
own



'Now then you—
human you! See those
teeth?'—Three tons of
bull Elephant seal.

PLATE 8



Gentoo posing for his picture just before his adventure with the pup.



Southern Foam approaching the stern of the factory with six Sperm whales collected from other catchers.



Sperm hauled up on our flensing deck.



The 'banana peeling' of the blubber using wire cables and light winches.

scratch the tummy and a small pink penis would project into the ripples. A pebble aimed at a silky flipper produced a surprised head with large liquid wondering brown eyes that nearly all seals have: 'Michty! one of those tormenting human creatures again. Oh, he'll soon get tired of his tricks and go away'—and the head sank under again.

Round the bay adult bulls and cows lay around on the sand with tremendous snorings that mixed with the throaty, choking bellowings of two arguing bulls reverberating across the calm water from the far shore. Elephant seals stay out at sea through the Antarctic winter and return to the breeding beaches about the beginning of September, when the single pups are born and the cows are served by the bulls again in the second week afterwards. The adults remain on land until December, when for a time they take to the sea, to return later for a few weeks to cast their coats. This final visit in the early months of the new year is late summer and autumn in the Antarctic, and by the time the old seals are ready for the final move to open waters, the pups are big and strong enough to go too. It is in the spring and autumn periods that the sealers drive the selected animals to the water edge where they are killed at close quarters usually by a shot through the head.

The elephant seals as I found them were generally placid old things, asking only to be left alone. Provided you don't accidentally stand on their sensitive flippers, they pay little attention to you walking amongst them. I sat down gently on a large sleeping cow seal, to get a warm seat while adjusting my boots, and throughout the operation she never as much as opened her eyes. Half in dreamland, she probably thought it was just one of her nearby boy friends. But when she gave one very big sigh I felt uncommonly like the small person who had discovered Gulliver on the beach.

We retraced our tracks toward Leith Harbour, but my poor oiled penguin had gone. Back at the ship later that night two Diving petrels clogged with fuel oil were brought

to my cabin, but spirit already used in an attempt to clean them had removed their own natural oil and they shivered themselves to death. I was afraid to give them too much heat, but might well have given them more. Next day it was a Gentoo penguin, a species rather larger than the Rocky. This pitiful little object stood at the water edge cluttered with the same filthy fuel oil. A butter shampoo was the best we could do and he was left in a safe place to finish it for himself.

Walter Manson was on the plan deck as I went back to the cabin.

'Why is man such a mean animal, Walter? Misery inflicted on others is of no account so long as he is not affected himself.'

'What's set you going this time, Doc?'

'Just look here over the side. Look at this oil pouring out now. What chance have the birds or seals got?'

'The god of whale oil, Doc. It's worse than a gold rush and seems to affect engineers too.'

'Well, oil-separators are compulsory on many ships and save far more than their cost, but this scramble for wealth seems to be a disease affecting man's better nature altogether. Look at yon catcher out in the bay now, steaming round pumping bilges. Does nobody care?'

'I doubt it; but you would be interested in Grytviken now. See them there if you get a chance. The Argentine boys certainly set an example. Last time I was round, not a cupful of oil was allowed overboard from any of their boats or there was hell to pay. You couldn't get an oil smear off their jetties even at that time. Aye, you may well look at this place. Bring it up in your report, Doc; you can do it better than the likes of us.'

'How are things going otherwise, Walter?'

'Three more catchers to store up. *Southern Soldier* and another of the boats are going out to-night to scout for Sperm and they are complete as soon as the harpoons are

'I'm just waiting for the Chief Steward to get more stores along. If you have anything for them, I'll get the boys over to the hospital for it.'

'No, thanks. I needn't bother you; the medical gear is all set for them all now. I'm just going over again later to look at my penguin patient.'

'They're great things, these penguins. I've seen them up on the football pitch when the boys were having a game. They would stand along the touch-line beside us and watch the ball up and down, and when someone kicked it over to them they would just step aside and let it pass, just like pirie

When *Leith* was in now, and the catchers from the two expedition fleets almost ready for departure. The penguin was not in too bad trim and I went on up the Glacier itself with the Leith Harbour doctor to get a last bit of exercise on ski, in both the upright and lateral positions as it turned out. On the way back we came on another Gentoo, evidently having been exploring and now on his way back to the water. The sight of floating ice may have influenced him in deciding to stay ashore a bit longer, and later that evening he was spied by one of the seven dogs brought down by ship from home. A Labrador terrier cross by the look of him; he streaked after the penguin apparently with aggressive intent. Gentoo stopped his meditative saunter and looked interestedly at this new arrival. Then when about thirty yards from his intended quarry you could almost see that pup's brain with a large question-mark rising out of it. 'This thing should be running away—it isn't running away—I'm not sure if this is going to be quite such fun as I thought—perhaps I had better stop a second. . . .' It was just too late; he came to a most undignified scrambling halt on the shingle almost at the feet of the penguin, who took him by the ear. The yell from a Labrador Irish terrier is not a very dignified yell, and before the echoes had died down he was well on his way back

to the station. When I told the men about it, they said nearly every dog that comes to South Georgia does the same thing and then comes to the conclusion that penguin-hunting was not one of his ancestors' occupations.* Meanwhile Gentoo had continued his evening stroll.

*The larger huskies with the Graham Land and other survey expeditions are reported to have done a lot of damage among penguins when not controlled.



Chapter Six

In the Wake of Shackleton



Mr. Sperm up from the depths where it is so dark. He always seems to be such a nice friendly person.

. . . Commonly we accept people on their own valuation. Here the outward show is nothing, it is the inward purpose that counts. So the 'Gods' dwindle and the humble supplant them.

EDWARD WILSON OF THE ANTARCTIC

In the Wake of Shackleton

NEXT evening, as the sun sent great shafts of light to stab the heavens from behind clouds edged with molten gold above the ice-capped mountains, we swung out of our land-locked harbour. No tugs, no channel buoys and no pilots this time; out toward the greyness of the east and another whaling season. Twelve knots along the tracks Shackleton's little *Endurance* had made thirty-two years before on her last fateful voyage to the Weddell Sea. Again Walter stood beside me, eight thousand miles from his peat-cut, and, like Foula, South Georgia faded in the gloamin'.

In some years, by November, icebergs are met with a considerable distance north of South Georgia, but now we were two days out, passing to the north of the South Sandwich Islands before the first one appeared far on the horizon to the north-east. A flat-topped table berg, phantom-like against the grey background, on a lonely drifting course, with possibly years of voyaging behind it since it broke from one of the land ice masses. Gideon, one of the bosuns, passed along the deck with some of the men preparing whaling gear: 'Aye, yon's like seeing an old friend again.'

As darkness closed in, two more bergs appeared on our radar screen in the chart-room, and we could follow them closely as they passed some miles away. One of our catchers, *Southern Spray* abeam of us, seemed to be heading straight for one icy wall. We tried to warn her by radio-telephone. There was no reply, but she was ultimately well clear.

The first of December, and by international agreement,

none of the Baleen whale species could be killed before the eighth, and of these only Blue, Fin and Sei whales could be seen.

Whales are warm blooded mammals although shaped rather like fishes; but unlike the fish, their tail flukes lie in a horizontal, not in the vertical plane. Along with the porpoises and dolphins, they form a large animal order, the Cetacea. They are divided into two main types, the Whalebone or Baleen whales, and Toothed whales. Whoever gave the name Whalebone to the first group was not very bright, or just having fun by his way of it; for the name referred to close-packed, horny plates along the mouths of the whales which are not of bone at all. These thin, stiff, flat plates, called 'baleen', hang curtain-like from the upper jaws and outside, and are frizzed out into a hairy-like mat on the inside. Toothed whales, of course, have a bony skeleton, but the name Whalebone given to a particular group has unfortunately persisted.

There is evidence to suggest that all whales and dolphins evolved from primitive carnivorous mammals that lived on dry land, and occasionally traces of atrophied hind limbs are still found embedded in the muscles. Such enormous bulk as the larger whales now have could never have been supported on four legs, and has only developed since they returned to life in the sea.

Small shrimp-like creatures, the Euphausiids which go by the name of 'Krill', live drifting in the ocean currents in the area of the Antarctic we are in now, and may be in such myriads that they give a pinkish coloration to the sea, although the same effect is very often due to vast numbers of tiny sea creatures called copepods. Up to two inches in length, but unlike shrimps, having no tiny, crab-like claws, krill form the main food of our particular Baleen whales. As he feeds, a whale takes in a great fill of sea water and krill into the massive mouth, the long external expandible throat grooves running back from the jaws to the chest allowing

the floor of the mouth to be greatly distended, not unlike the throat of a frog. And as his jaws close and the soft tongue is pushed up to the roof of his mouth by the powerful throat and chest muscles, the sea water is sieved out under pressure through the baleen plates. The krill trapped on the hairy inside of the baleen curtains, are drawn back by the throat muscles to be swallowed. In the Northern Hemisphere, more often small fish are in the diet of Baleen whales.

The Toothed whales have none of this baleen, and all the porpoises and dolphins are in this group. But we meet only two toothed species in our Antarctic travels, the great Sperm whales, and the much smaller Killer whales or Grampuses (*Orcinus orca*) which grow to thirty feet in length and which our Rocky penguin friends called the Orcas. These two have big teeth, generally blunted, not fine and sharp like Leopard seal.

International whaling laws would not hamper our taking Toothed whales, and as the Killers were too small to bother about, our catchers were after the Sperms. Only big bull Sperm whales are as a rule seen in Antarctic seas, and are generally solitary, going straight down into the middle depths on half hour to forty minute dives to feed on the squid that live down there in the darkness.

That first evening on the whaling grounds our catcher *Southern Wilcox* told us by radio that one of her deck crew was missing. How he had gone overboard was unknown; calm weather and not a sound had been heard, and a long search back on her tracks was unsuccessful.

Next morning *Southern Foam*, acting as collecting 'buoy boat' came up with six Sperm whales forty-seven to fifty-three feet in length, taken over from the other catchers that showed by just wisps of smoke on the horizon. A good enough start for a great factory able to handle on her first voyage twenty large whales daily.

The machinery began to get into motion. Wilhelm the

man was at the stern, keeping an eye on the first operation. A heaving line from the stern of the factory, and *Foam* rolled over the first whale-anchor rope to shackle to the wire snop round the tail of the first Sperm. There was a clatter as the first towing chain pin on the foredeck of the factory was knocked out—The first whale had been handed over.

As the light winch at the top of the whale ramp drew the Sperm tail first into the ramp opening, two stern winches on the deck above manoeuvred a great cast-steel scissors claw down to fit snugly over the base of the tail. The heaving strain was taken from the claw by heavy wire cables to two forty-ton steam winches on a gantry amidships. The great carcass came slowly foot by foot out of the water and up the ramp between our twin funnels. The flensers were giving a fine hone to the fine, curved, cutting edges of their long-shafted, two-handed knives. Five more Sperms transferred to the stern mooring bollard of the factory to await their turn, and *Foam* departed again.

As the carcass was dragged up on to the after-deck, great longitudinal flensing cuts had been run through the six-inch blubber from end to end almost before the winches had stopped. Two harpoon shafts projecting from the creature's side had scored deep grooves in the temporary wooden decking, justifying it at the very start. The rest was a glorified banana peeling. A wooden toggle through the head end of a broad strip of blubber was shackled to the wire of one of two light winches also on the midships gantry, and with a little assistance from the flensers the whole strip peeled off, to be cut into small pieces and dumped through deck feed-holes to the cookers below. Four hours cooking in the blubber boilers and the oil would be out, and nothing left but a residue of 'graks' to be ejected as a fine, white suspension into the sea.

Blood was running down the skidway back to the stern and a flock of Cap doos were bickering madly at each other

as they pattered amongst it. A slight leakage of our burner oil made a trail to one side and the birds were careful to keep clear of it.

Side winches rolled the sperm over for the underside to be flensed; the carcass was then handed over to the battery of winches in the forepart of the ship and hauled along to the cutting deck, while the stern winches pulled back the heavy claw to the tail of the next whale.

On the forepart of the spacious deck, where the cutters take over, the lower jaw of the Sperm was cut away and the teeth removed by axe and sledgehammers. The red back muscle meat taken out in lumps and transferred to the forward cookers below for the extraction of its oil. The last few vertebrae with the tail followed and the main vertebrae and ribs handled by steam cross-cut saws into suitable sizes for the same treatment. The cookers ate up everything they were given. A knife cut through into the great head, and the spermaceti ran out in a translucent stream to solidify to candle grease on the cold deck, gallons of it. The first bosun stood in the midst with a short whaler's meat-hook in his hand.

'Stand clear there!—Look out! . . . When a winch starts up here, Doc, they just haul for dear life until they get there or something breaks, and I've seen a man's leg taken nearly clean off.'

'Don't you save that spermaceti oil now, Adam?'

'Well, I don't know where they get their best-grade candles from now, for it just goes into the cookers here.'

We were two hundred miles east of Saunders Island in the South Sandwich group. Wind from the north-east was veering to south east with a sky of fair weather cumulus. Sea-water temperature was 31° Fahrenheit and occasional quarter-mile long bergs were around at ten-mile intervals. A small party of penguins squawked alongside the ship, swam round the bows and disappeared. I wondered why

they were so far from the nesting sites; perhaps they were immature.

The mate stood below the bridge surveying operations with an eye occasionally on the horizon. Some of the men were preparing to warp whale intestines over the side.

'The guts not going for fertiliser, Mr. Wilhelmsen?'

'Not worth the space it would take up, Doc. It is not like South Georgia, where they have plenty of room. We lose the blood and guts, and the baleen from the Blues and Fins, of course, except for the few pieces we take home.'

'But the blood; five tons of it in each whale means a hundred and fifty thousand tons lost each year in the Antarctic.'

'Well, that is so, but the Germans were the only people who ever saved it.'

Next day was fog, and only one Sperm arrived in the morning just at the break for lunch, and he was left for a bit at the top of the ramp. I smoked a contemplative pipe as I studied the old chap's remains. The shaft of a harpoon stuck out behind the head and I did hope it had killed him at once without suffering. What a peculiarly small lower jaw hanging from such a massive head. Tommy, the fireman acting for a few days on *Southern Shore*, had told me he was one year on a catcher hunting Sperm in the Peru Current when a big bull, irritated by a glancing harpoon, had rammed the catcher, and, as Tom described it—nearly put the engines out through the far side.

'When I gets to my legs again, thinks I,—you old son of a gun, if you're coming in here I'm going out.—The engines were stopped, so up top I got wi' half the Pacific Ocean coming in behind. We got off in the small boats with old Spermie thrashin' around. Then he just shakes the catcher off his nose and goes off. The old boat was gone in no time too and another picked us up.'

The female Sperm whales are small compared with these bulls and rarely if ever seen in the Antarctic; their haunts

being the seas such as round South Africa, and in the Peru Current running up the west coast of South America. Have these older bulls in Antarctic waters been pushed out of the breeding herds by younger animals ; or are they like the red deer of Scotland in the rutting season, when the stags retire for a bit when in need of a rest? Study of them is difficult. But they are fine, independent old things asking of life only to be allowed to attend to their own affairs. We have the same fondness for the bulls on our farms at home. People at the agricultural shows will admire the cows as they are paraded, but when the 'Bullies' are walked round they seem to have such a homely, docile teddy-bear look about them. A murmur of comment goes round and the ploughmen chaff the cattlemen in charge: 'Did ye brush his teeth, Jockie boy?' A general laugh, and the kiddies want to stroke their curly faces.

He must have been a grand old warrior this that now lay on our deck. From the angle of the jaw ran long score marks that are often considered to be made by the vicious hooks on the tentacles of the giant squid in their death throes as they are seized. But many criss-cross scars on the battering-ram head might well have been inflicted by other Sperms during personal arguments. Circular marks rather like those left by a limpet on rocks are often found on these whales. Some of these may be made by the chitinous rings surrounding the suckers of the squid tentacles, others from parasitic marine life such as large barnacles which become attached in tropical and sub-tropical waters, only to drop away in the cold southern seas. Still other circular marks have been shown to be due to those other parasites, the lampreys. Scratch marks too may well result from contact with sharp coral as Sperm takes to rooting out such as octopus in shallower waters.

Just how he does it may always remain a mystery to man, but what a thrill it would be to go down with a great bull Sperm, down to where the light of day cannot penetrate,

and watch him feeding, and perhaps see the tentacles of large squid disappearing like hay into the mouth of a placid old cow. The largest squid I ever found in the stomach of a Sperm was seven feet, a mere baby compared with those we know exist. But even a great forty-foot squid has little chance when our friend is hungry.

Whalers will tell of how Sperm kills his food by crushing these creatures with his head against the bottom of the sea. That story may have started in the days of Moby Dick, when a whaling voyage might be for three years and men had more time to use their imagination. Perhaps some day we can get a young Sperm into an observation tank and watch him.

To-day it is suggested that the Sperm head, about a third of the body, and partly filled with spermaceti, may be for vitamin storage. Yet is it not more likely that here we have the reservoir of a body-pressure equalising system, of which so far we have been able to understand practically nothing? Is there any other creature in existence that can dive to such tremendous depths and rise again so quickly without trouble? Probably the Bottlenose whales (*Hyperoodon rostratus*), and rather a long way behind in third place, the Fur seals of the North Pacific, are Sperm's nearest rivals in deep diving. Doctor Remington Kellogg, Director of the United States National Museum in Washington, has told me of the report of the cable ship *All America*. In April 1932 she was investigating the cause of an interruption in the service of the submarine cable between Balboa in the Panama Canal Zone and Ecuador. She hoisted to the surface a dead forty-five foot Sperm whale from a depth of 3,240 feet off the coast of Colombia. The cable was twisted round Sperm's lower jaw and body. Pressure at such a depth is nearly a hundred times atmospheric. So why do whales not suffer from caisson sickness or diver's bends that we know would badly affect a human who came up quickly after working for a time in even shallow depths? The human

diver's trouble comes from the sudden release of nitrogen from his blood after excessive amounts of it have been absorbed under the pressure. The answer in the case of the whale is probably just the simple one that there has been no one to keep him supplied with continual quantities of air while he is down and he has with him only the comparatively small amount with which he may have filled his lungs before he dived. He manages to stay down, for like the seals he is able to draw on stores of oxygen in his muscles to a far greater extent than we can.

Our Sperm hunting continued until zero hour for the Baleen fishery on the eighth of December. We had caught thirty three animals and the sperm oil had all been stowed in separate tanks and the decks washed down ready for the handling of the more valuable Blue and Fin whales. Among the Sperms no ambergris had been found. There does not seem to be much connection in appearance between pearls and this grey, muddy, wax-like material valued as a fixative in the perfumery trade, yet the function may be similar. Indigestible bodies, such as the horny beaks of the squid, irritate the Sperm's intestine, so he walls them off by a coating of this 'grey amber' just as the oyster forms his pearl around a piece of irritating sand.

Any further biological contemplations I had on the morning of the eighth were soon dispelled by a knock on the door :

'*Southern Spray* alongside with a hand injury, Doc.'

The hospital was keeping pace by being a little busier too. Already in the early morning a toe had been sheared from one foot by the worm conveyor of the meat-dryer during a test of the plant. Two more burn cases last night and a rectal abscess on the list for the forenoon. Now this was an A.B. from *Spray* with a hand that had been caught in the catcher's winch while trying to free a rope. Two fingers mangled and he would have to be relieved on the catcher for a bit and remain with us.

On an expedition like this of many ships, often widely scattered, the function of a medical set-up was to get everyone interested in helping with first aid. Many hand injuries were slight and could be treated on the spot without having to get the men to report to hospital. Packages with iodine, finger bandages and cotton-wool were kept supplied to the engine-room, chief steward, night and day bosuns on the plan deck, the factory deck below, in charge of the liver-plant operator, and the butcher's shop. The catchers, of course, had their own medical equipment. But the danger of puncture wounds was stressed in view of the possibility of gas-gangrene organisms from the whales, and these always came to hospital immediately at any hour. Men have tried working on whales with gloves, but it has always been found that the danger of infected wounds is greater than with bare hands, and the oil from the carcass is enough protection for the skin in the Antarctic cold. Later I found the finest dressing to seal up cuts while on this work was bismuth iodoform paraffin paste, the B.I.P.P. which my old hospital in Dundee had used so much. Yet its value seems to be so little realised in these modern days.

It was often difficult to use a stethoscope in the ship's hospital located toward the stern, when the main engines were going, so chest examinations were timed for when the ship was not moving, but then we would have the bangings and clatterings from the whale ramp outside as the work went on. All that we got accustomed to, but any delicate operating-theatre work became difficult if the engines were suddenly put full astern, for the whole hospital then tended to shake so badly that instruments would fall off trays and bottles go off on their own. Captain Begg understood at once, and 'Half astern' became the rule except in special emergencies. But it was difficult for them on the bridge, for the ship did not always handle easily, and it took a lot to pull her up once she had way on her.

But as the carcasses of the great whales came up with

regularity I so often felt that if there was any real justice I should be putting bandages on those whales rather than on their tormentors. It seemed so wrong for men to mutilate these creatures with harpoons until the waters were red with their blood, and then come to have cut fingers attended to.

Three catchers reported Blue whales along the pack-ice edge to the South. *Solva* came in three hours later with two, followed by *Satsa* and *Southern Wilcox* with similar tows. The slower boats took longer, but were in by evening. Twenty Blues and one Fin whale, a flying start in beautiful weather.

Half a dozen Killer whales, the *Spekkhugger* to the Norwegians, were active round the stern, helping themselves to the tongues of the dead whales. The Killers were just the scavenging packs of the Antarctic seas; that would take the penguins if they could catch them, and were considered to be the culprits who left long, raking scars on the Crabeater seals. Probably the Leopards were the only people that paid no attention to them. Numerous are the stories of even full-grown whales being attacked, but I know of no instance of a man being involved other than a mention by Herbert G. Ponting, while on one of Scott's Antarctic expeditions, when Killers tried to upset a floe he was on while doing photographic work. But their eyesight might well have taken him for a seal.

But we were certainly in no position to criticise the Killer whales no matter how rapacious they might be on occasion. This was their Antarctic and they were taking only what they needed to fulfil the mission for which they were ordained. It was we who were the vicious intruding destroyers. Whaling on the scale it was being pursued, and mixed up as it was in an international barter for currencies, was certainly not a necessity; for even one other source alone, the lands of the tropics, could respond to the demand for all the oils we needed from vegetable sources if only we

took care of the soil instead of destroying it to the utmost of our stupidity.

That night the sun dipping on the horizon of a calm sea turned the antics of the Cap doos at the stern into a dance of the golden sprites.



The shrimp-like *Euphausia superba* (Krill) here are shown guarding the picture of a microscope enlargement of the tiny plankton forms on which they feed. This sample was taken from the edge of an ice floe in the Weddell Sea.

Chapter Seven

What Dreadful Thing is This?



The factory with a whale being hauled up the stern ramp. The catcher is coming alongside to take on bunker oil using another whale as fender. Snow petrel passing across the picture means that pack ice is not far away.

What Dreadful Thing is This?

THE sea occasionally choppy, with a slight swell for the last few days, quietened as ice bits began to drift past, with a few small bergs and growler ice. Beautiful Silver Grey petrels had been with us for some time, but now the spotlessly white Snow petrels, with their ebony-black stubbly beaks, planed across our bows. They are the whalers' particular friends, especially in hazy weather. Never found far away from pack ice, their appearance is a sign of it being in the vicinity, although there may be no indication of it otherwise.

A slight fog lifted, and Captain Begg decided to move two hundred miles eastward to where *Southern Soldier*, our powerful scouting catcher, had reported more Blue whales. 'Ice blink', the white reflection of pack ice on overcast sky, showed far off on our starboard bow. Bergs of fantastic shapes glided past, and one, heavily coated with fresh snow, and with gentle slopes down to the water, was the temporary cruising home of a host of Chinstrap penguins, those sometimes known as Ringed penguins. Much the same size as the Rockies, but their appearance is just as though they had little black skull-caps and a thin black line from the back of the cap under the eye to the throat, for all the world as though it was a piece of elastic holding things in position. These Chinstrap people stood in groups on the snow slopes watching us as we passed.

'What great dirty iceberg thing could this be all black and belching filthy smoke all over this clean place?'—
'Whalers, did you say?—We must warn the whale folk.—
Dear oh! why can't they be content and eat some of the

PLATE 9



Looking aft along cutting deck of the factory



A Fin whale moored
amongst Blues at
Harvester's stern.



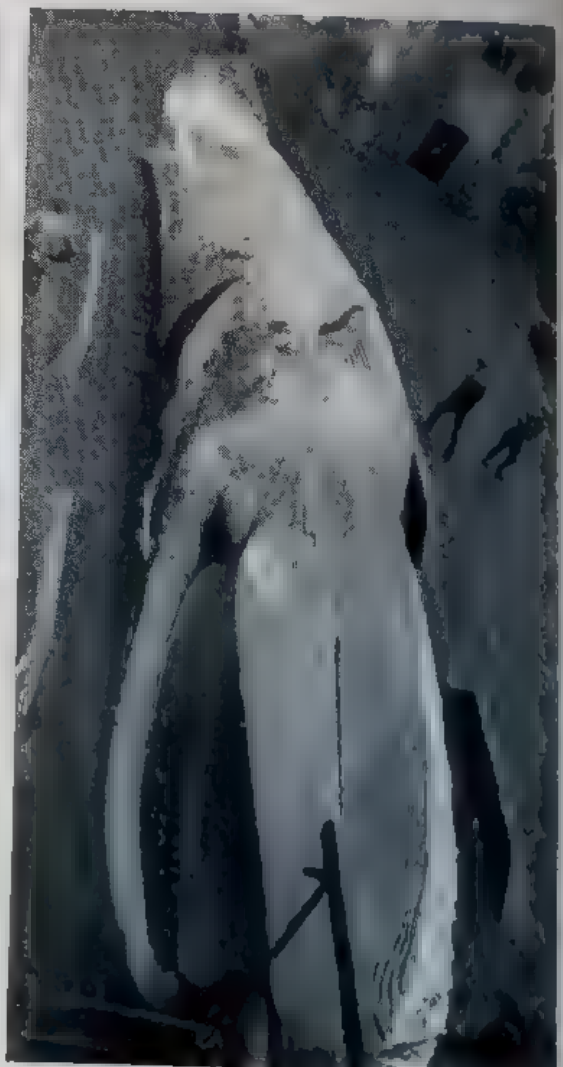
Investigation committee. Our
Killer whales approach.



But the chief inspector is there first. Clistrap penguin on his Fin whale. The balloon-like object is part of soft whale tongue accidentally inflated by the compressed air used to float the carcass.



First Blue whale is hauled up the stern ramp on his side. Blood runs from the blowhole and a harpoon projects from the back.



Blue whale 93 ft. long on deck.

small Krill and Squid creatures as the rest of us do?—There are enough for everyone.'

Next morning we were continuing east at slow speed, as our engines had to be content with what steam could be spared from the processing in the factory. Whales were picked up from scattered catchers on the way.

Then Johan Johannesen, one of the flensers, carrying his flensing a bit too far, stepped inside the tremendous jaws of one of these great Baleen whales just as the carcass was being turned over by the winches. The jaws closed, and apparently all that could be seen of Jos were his boots sticking out. The whale was rolled back as quickly as possible to get the jaws open again. Johan's mates thought he was a goner and so did he, but caught between the baleen cushion and the tongue, these soft parts saved him and he got off with four broken ribs, and leaking lungs that gave him emphysema from the neck to the waist; this air in his chest wall, crackling like tissue paper as he breathed or moved. Poor Johan, for days he kept asking me in a whisper when he was going to be put over the side, but he was back on the flensing deck in less than a month.

In the wireless room, daily routine went on. Communication with each catcher in turn by radio-telephone as to whales seen, being chased or caught; what food or other stores would be needed on the coming visit to the factory for bunker oil. All in code to give away as little as possible to rival factories that might be in our vicinity: 'Any chance of any more eggs?'—'No; no green vegetables at all.' (There were some sickly-looking white things that were put on board as cabbage in England: plenty of minerals in them, but not a vitamin in a ton of the stuff.) 'Sorry, the medical department says you will have to take some fresh whale meat and undercook it instead.'—'Tired of tinned milk, are you? Well, so are we all, and there has been a row here because all the gallons of fresh milk put on board for the hospital patients have disappeared.'

There were the weekly reports on the expedition catch to international control headquarters in Norway. And as December wore on the operators had to try to fit in Christmas telegrams from the men to their homes in Britain and Norway whenever they could. In the South Atlantic sector these were generally sent via Simonstown radio station in South Africa, and thence to Portishead; but when Simonstown failed to pick us up, Ceylon was sometimes able to oblige.

Night and day now the factory work went on, in twelve-hour shifts, and with the almost perpetual twilight of the summer nights the catching vessels took only the briefest rests in the twenty-four hours.

'Southern Star calling Harvester—Star calling Harvester—come over, please.'

'Harvester calling Star—yes, Star, we hear you, come over.'

'Star here—we reckon to be less than twenty miles to south'ard of you and need bunkers soon, but we have no whale as fender. Can you take us?—over.'

'Harvester here—no, Star, our last whale is taken up, but we are steaming E.S.E. to Wilcox and expect to see him in the next half-hour. He has just flagged a whale. Captain Begg suggests you head east of our bearing and pick up that one—over.'

'Star back to Harvester—yes, we get that—we'll take the bearing then, please.'

I was fixing specimens of whale gonads for St. Andrews University, when the officer of the watch 'phoned me from the bridge not to miss a particularly beautiful sunset.

A calm, glassy sea and azure blue expanse above with alto-cumulus cloudlets tinged pink from right overhead turning more and more orange down toward the west, where a cluster of castellated and table icebergs stood toward the horizon between us and the molten origin of it all. The bergs appeared as though of translucent glass, transmitting the light themselves, and from behind, tremendous

golden light shafts reached up to diffuse into the heavens. The sun in these latitudes was reluctant to go below the horizon at all. The air temperature was above freezing $33\frac{1}{2}^{\circ}$ Fahrenheit and the sea water on the surface just 30° . It felt no colder than a summer night at home. The ship at a standstill now, and two Killers were taking an interest in some floating entrails out on the beam, their short blows sounding sharply as though they were just below us. The occasional rattle of the winches on the plan deck seemed just to emphasise the stillness until the clanking of the meat conveyors spoiled it.

'This is what's called civilising the heathen Antarctic, Doc.'

The officer of the watch stood at the end of the bridge with me. We watched the golden searchlights fade, and the iceberg fires drop to a dull glow. And below us the blood of the whales that yesterday had been happy just to be alive ran down into the water.

The next evening it was the same, not cold, and with the sun still high I took a deck chair to the boat deck aft. Three fin whales were moored at the stern, and—a familiar squawk alongside. Two penguins splashing around, lying first on one side to vigorously wash themselves with their flippers, then over on the other side. 'Hello there!'—and they would look up, then a bit more splashing, while a Chinstrap penguin pal climbed out on to one of the dead whales.

'A bit of a motion on with these whales and fearfully slippery for a penguin this . . . oops'—*splash*—'All right; we'll try nearer the tail and go up the long way . . . ah! that's easy, first shot . . . slowly now, careful, one foot at a time.'—Until he found a comfortable stance in the female genitals and stood alternately dozing and taking a mild interest in the dorsal fin of the occasional Killer.

Our engines were at 'Slow ahead' now and he rocked gently back and forward on his raft. And the bergs drifted gently past, seaworn cones around their bases and caves of

gradually deepening translucent sapphire. The 'cuckering' of the Cap doos was a subdued murmur, and like penguin I dozed too.—Could this mystical land be on the same world as the dirty man-city in so-called civilised England we had just left two months before? I thought of the Rockies in their happy city on South Georgia—Perhaps that really was Alice standing there looking over the side, and White Rabbit with his elbows on the lowest rail. . . .

It all came so clearly then. Of course, what I thought was penguin climbing out on to the whale down there was the Dodo, no penguin would have had such difficulty in getting on to a whale. . . . And one very big berg came drifting along right beside the ship, very slowly, with snow slopes down to the water. Strange, it was the very same berg we had seen before, and the penguin people were still standing on it while others shot up out of the water to sprawl in the snow. It was so easy to jump down on to it too from our deck, and as I fell, two other people seemed to fall on top of me. All I remembered then was the snow stained red where my boots had landed and the water round the berg stained with blood. When I managed to think clearly I was half-buried in snow with two penguins close by talking. The smaller one seemed quite agitated:

'But why must these men keep coming back to do this horrible thing to the whale people? Did the whales do anything to the men?'

The older penguin kept staring away in the distance.

'No, son, they did not, but just as Leopard likes to take us to eat, these men creatures want to take the whales. But they take far more whales than they can eat, because they want to make what they call money out of them.'

'Do they eat this money?'

'I don't think so, but I understand it makes them feel big and important. I've heard your old grandfather at Deception Island say money makes a man feel he has power over other men.'

'But, sir, why do men want to have power over other people and make them do what they want? Isn't it just nicer to sleep in the beautiful sun and let other people sleep too or to swimming if they want to?'

'Yes, child, but then you're just a mostly happy penguin like the rest of us. But men once they grow up aren't happy any longer. They never leave their cities as we penguins do, but just stay and squabble amongst themselves. The ones who don't know how to look after this money stuff are jealous of the others; then they come to feel that to have power to hurt everyone else is better even than having money. Then they love to kill any men or other animals who don't agree with them being powerful. I was told this son by sperm whale who travels such a lot.

'But would they hurt us too, sir?'

'Oh, quiet, son. I have heard of that too. How in a place called the Macquaries not far from here, men once drove us alive into boiling cauldrons to melt the fat from us. Our people cried in their agony, but it made no difference, for we were being turned into this thing called money. They don't make it out of us any more now, but they killed nearly all our Fur seal friends too and then Elephant seal, and now our whales are being tortured with harpoons that burst inside them. And my boy they may turn on us again after the whales are gone.'

'But, please—tell me, what can we do to help Whale now? Could we not warn Bluey to get away in amongst the ice where these men cannot go?'

'You could try, son, you could try, but it will be a big job for a little penguin. But you are a brave lad and I would come with you if I was not so old. You may get Blue whale to listen, but Fin doesn't like the ice. Try, though, but be careful of the Orcas, and don't go near Leopard unless he is resting out on the ice when he isn't hungry.'

'Well, thank you; I'm going to get the others to help me at once—Goodbye, sir.'

There was a splash, and the older penguin stood alone. He glanced down at the water as the ripples disappeared and as he shook his beak, was that a tear that landed on my hand? It is a serious thing that can do that to a strong old penguin. He looked away toward the factory ship in the distance with its trail of black smoke and blood, and his head sank slowly on his chest—I suddenly realised I was cold in the snow and looked round for White Rabbit and Alice. I was certain they had jumped from the ship with me. But I could see nobody; even the penguins had gone, and the berg seemed to be grinding against rocks. We had drifted in under the cliffs of Mount Caronda beside Penguin City and strong hands reached down to pull me from the snow.

'Asleep, Doc? You'll freeze to death up here.' It was the Third engineer. 'Chief isn't feeling too grand and wants a word with you in his cabin.'

'Righto, John. I'll be right down.'

A breeze from the north-east had sprung up and fog was drifting down. On my knee lay Kipling's *Jungle Book* open at 'The White Seal'. I had forgotten having brought it up. Just where had I been? Was another little crusader going to follow the trail of Kipling's Kotick? Dodo—well, Chin-strap, then—was gone from the whale, but a little further out a small head and stubby tail of another bobbed up—'Fwaaak'—yes, the fog he had warned us about was coming along fast. Did I detect a note of triumph in that shout?—Oh, Whales, you have indeed some gallant little allies.

The Chief was just tired out with lack of sleep. A new ship sent out on her maiden voyage unfinished, untried, thrown into the mad scramble for oil. The engineers had had a nightmare to straighten out before any oil could be produced at all, and it was telling on them all.

* * * * *

The engines stopped again as we approached a catcher with another Blue whale. Ninety-three feet long, that proved

over a hundred tons, the weight of over a hundred fifty cattle or twenty-five elephants. This was the great Jurassic and Cretaceous dinosaurs could not compete with. Right through the Tertiary era Nature was being evolved. Was it possible that in a few years of destructive greed this man organism was going to put forever the patient evolutionary work of the past that had taken fifty million years? If man goes on doing, Providence, or whatever else we like to call it, will surely decide that his numbers will have to be greatly reduced, and at no distant date. The disappearance of certain species comes about in normal evolution, but wanton destruction in the quest for money or power in the name of commerce or anything else has no place whatever in Nature.

The fog cleared again in the morning of next day after which a procession of twenty more Blues and Fin whales resulted in the 'fishing' having to be stopped, as we had more than the factory could handle with sufficient speed before excessive putrefaction set in to the last ones caught.

Handling these Baleen whales on the factory is the same as with the Sperms, except for rather more wastage, in that the curtains of baleen are cut away and thrown overboard, only a few pieces as the mate said, saved toward the end of the season, and still used in brush manufacture. A certain amount of the red back meat was now being put through mincers, then through drying plant to form a dehydrated meat meal mainly for use as animal feed. But the idea of selling the frozen meat for human consumption in Britain was only slowly being tried out. It had already been done for many years in other countries; but the contamination of the carcasses by putrefactive organisms resulting from the use of the explosive harpoon was obviously going to be the main factor against it.

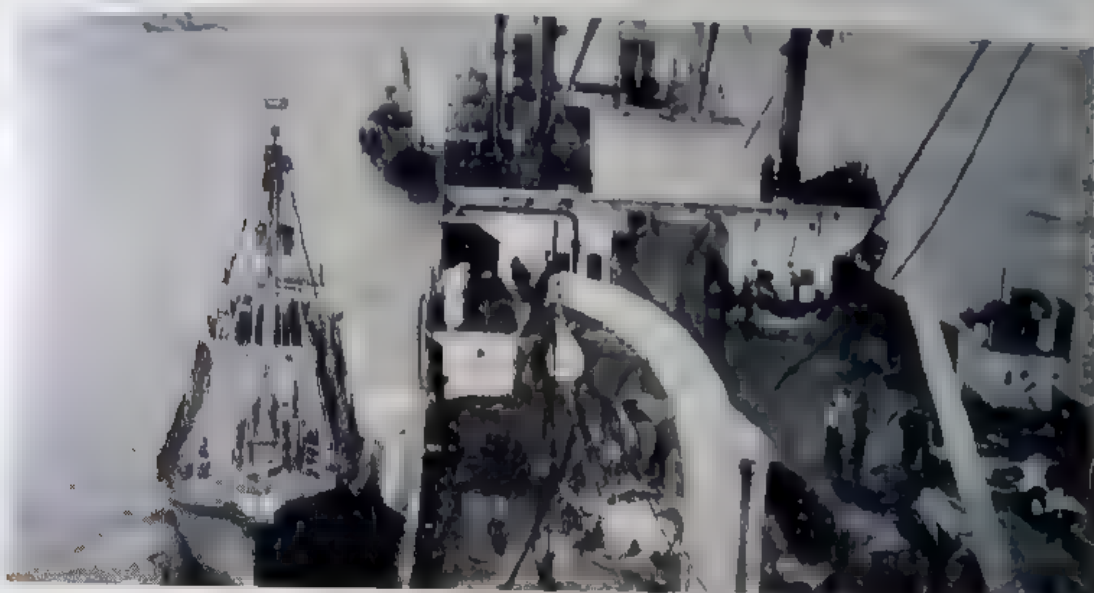
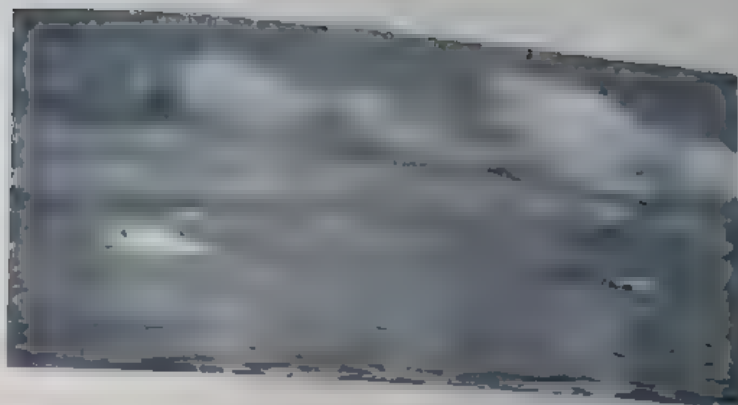
The head of the Baleen whale is slender compared with the massive battering-ram appearance of the Sperm. Both

adult jaws are toothless, just bone with a thin covering of skin and blubber tissue. Only in the study of the embryo was I able to find rudimentary tooth buds, apparently further relics of the structure of the primitive whale ancestor. They appear early, embedded in both upper and lower jaws, but had invariably disappeared by the time pregnancy had reached five months. Total period of gestation in Baleen whales is considered as from eleven to thirteen months, the developing calf of the Blue whale may grow to twenty-three feet by the time it is born, and weigh over seven tons. The lower jaws of these larger whales we were now handling were massive compared with the narrow under-jaw of the Sperm, the tremendous mandibles forming the frame of a gigantic scoop, giving attachment for the muscles of the floor of the mouth. A real power-operated digester gently bulldozing its way into the food supply, the Krill, that in their myriads are larger forms of the great plankton family of marine life drifting with the ocean currents.

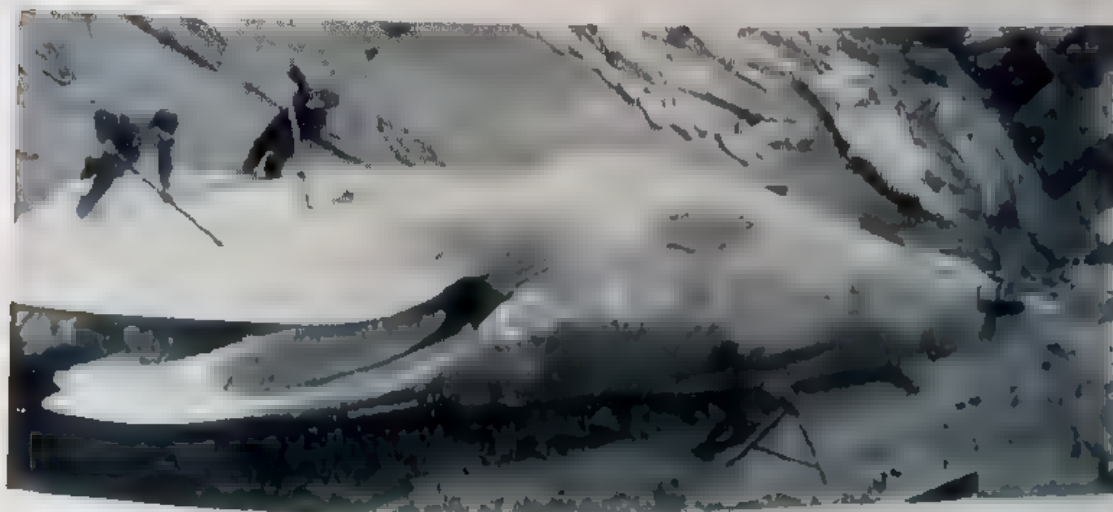
Now working on the reproductive system of the whale, I waited at the top of the skidway just before a lunch break, to get a dissection of the female mammary glands done while the men were away and things were quiet.

But the next whale was a male Blue, a fine specimen, but pathetic as the blood poured from the blow hole and dripped from ragged harpoon wounds in the back. The six-foot protruded penis tapering from ten inches diameter at the base to just over an inch at the extremity, trailed the end eighteen inches on the deck. The sex of a newly killed whale can sometimes only be recognised quickly by the distance between the genitals and the anus, for the penis is normally retracted completely for streamlining in swimming, like the undercarriage of an airliner. But after killing, the air pumped into the carcass to keep it afloat, usually forces the penis to the external position. The testicles too, like the ovaries, are internal. Nature has it all thought out. It was next day before a female Fin whale, on deck with only

The beauty of drifting
ice in the Antarctic



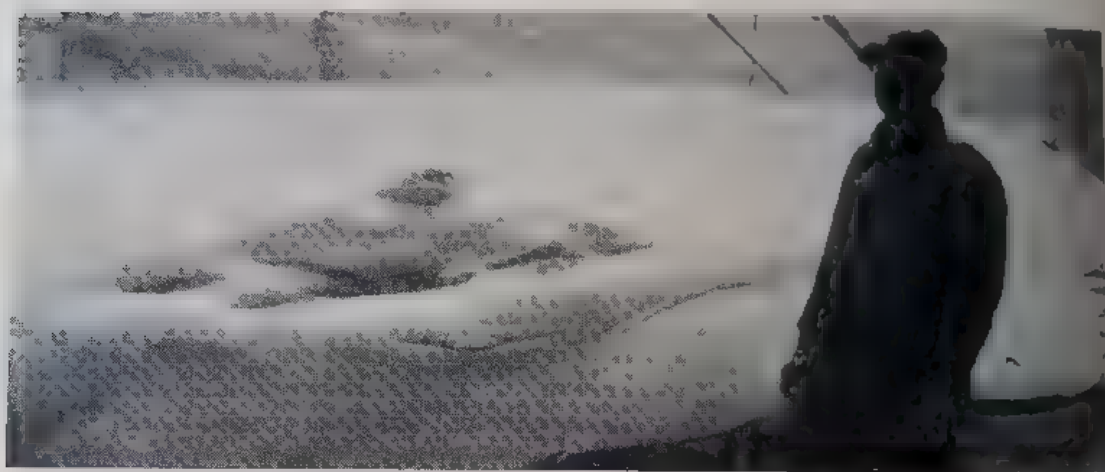
Looking astern from *Hareester's* bridge. Catcher *Southern Soldier* retreats using a whale's fender. At the top left corner in the distance is *Simbra*, later lost.



Flensing the underside of a Fin whale. The grooves from the floor of the throat to the chest allow great expansion in holding large amounts of sea water while feeding.



Male Fin whale on deck showing the penis protruded due to the compressed air. Hensler Finn Andersen points to a brown patch of diatoms.



Boston Gideon Sinclair beside the external genitals of a female Fin. Partly protruded nipples show at the posterior ends of the mammary glands.



Female Fin stripped of blubber. Mammary gland outlined on the carcass with ink, and arrow head indicates the position of the nipple. The vertical marks are dissecting knife cuts. End of intestine protrudes.

the blubber stripped, allowed completion of the dissection. The whale womb is similar to that of most of our domestic animals, with two branching cavities. Twin births appear occasionally, while triplets and up to septuplets have been found. The 1952-3 Antarctic season was to see sextuplets again recorded, on board the Union Whaling Company's factory ship *Abraham Larsen*, when a Fin whale was taken in which the six foetuses varied from just over seven to nearly twelve feet in length. But the mechanism of labour must be an unusual one. There is so little muscle in the very thin walls of the womb, that the abdominal wall muscles of the mother must do nearly all the work.

The milk glands and how the calf is fed are of great interest. The breasts dissected in this non-lactating female I found to be flat organs five to six feet long just beneath the blubber on either side of the midline, running forward and slightly outward from the nipples which lay in six-inch deep protective clefts on either side of the vulva. The width of the milk tissue in each was fifteen to eighteen inches at the widest, narrowing forwards and of fairly uniform thickness of one to two inches. The nipples protrude when the calf is suckling. Just how he suckles or for how long at a time is not certain, but Dr. Francis C. Fraser of the Natural History Museum at South Kensington in London has done so much work on the whales, and I quote here from notes I have taken during many discussions with him following expeditions over the years:

Unlike the degenerate, flabby tongue of the adult Rorqual,* the suckling calf tongue has a strong muscular ridge along each side of its upper surface with an intervening gutter-like depression which widens out in front into a basin-like

* The name Rorqual is used to cover a certain group of our Baleen whales that have a long slender body, short flippers, and a back fin, such as Blue, Fin and Sei whale. The Penguin's friend Humpback is not in this group because his flippers are much too long and his body is rather dumpy. Other whales have tongues which are not flabby but muscular and strong.

hollow behind the tongue tip. It is believed that when feeding, the calf presses the tongue ridges to his palate, sucking the milk from his mother's nipple along the resulting passageway from which sea water is excluded.

Really very like some of our other wild creatures, especially baby badger, only perhaps more watertight.

And now I found the mother's milk glands to have numerous muscle fibres attached, so she may assist the youngster to get his meal quickly by a contraction of the gland. She may also lie on her side, that he may get air more readily at the same time, although such as the baby hippopotamus is apparently able to suckle below the water surface of his river for as long as half an hour. The young whale may be subject to attacks from Killer whales, but these are possibly more scarce in the subtropical waters where he is born. With his mother's milk providing up to forty-five per cent butter fat and ten per cent protein, the calf makes great headway, and has doubled his length by the time the weaning process is commencing at six months. All the while, mother migrates southwards slowly to give the youngster time to develop sufficient blubber protection against the increasingly colder waters.

Later on, Josephine, a friend sitting at her desk in England eight thousand miles away, was to write to me: 'I've been getting more and more fascinated by the Antarctic—your fault in the beginning of course. Then I came on Scott's *Voyage of the Discovery* and since then have been reading everything on the subject that I can lay hands on, and feel that I know each one of these men personally. I don't wonder that you revolt at our smearing cruelty in that vast heroic land.' She copied out one of D. H. Lawrence's last poems for me, which Mrs. Frieda Lawrence and his publishers, William Heinemann Limited, have kindly allowed to be reproduced here. Of what consequence is a little biological poetic licence in a work of this calibre?

WHALES WEEP NOT!

III

They say the sea is cold, but the sea contains
the hottest blood of all, and the wildest, the most urgent.

All the whales in the wider deeps, hot are they, as they urge
on and on, and dive beneath the icebergs.

The right whales, the sperm whales, the hammer heads, the
killers
there they blow, there they blow, hot wild white breath out
of the sea!

And they rock, and they rock, through the sensual ageless
ages

on the depths of the seven seas,
and through the salt they reel with drunk delight
and in the tropics tremble they with love
and roll with massive, strong desire, like gods.

Then the great bull lies up against his bride
in the blue deep of the sea

as mountain pressing on mountain, in the zest of life:
and out of the inward roaring of the inner red ocean of
whale blood

the long tip reaches strong, intense, like the maelstrom-tip,
and comes to rest

in the clasp and the soft, wild clutch of a she-whale's
fathomless body.

And over the bridge of the whale's strong phallus, linking
the wonder of whales

the burning archangels under the sea keep passing, back and
forth,

keep passing archangels of bliss

from him to her, from her to him, great Cherubim

that wait on whales in mid-ocean, suspended in the waves of
the sea

great heaven of whales in the waters, old hierarchies.

And enormous mother whales lie dreaming suckling their
whale-tender young

and dreaming with strange whale eyes wide open in the
waters of the beginning and the end.

And bull-whales gather their women and whale-calves in a
 ring
 when danger threatens, on the surface of the ceaseless flood
 and range themselves like great fierce Seraphim facing the
 threat
 encircling their huddled monsters of love.
 And all this happiness in the sea, in the salt
 where God is also love, but without words:
 and Aphrodite is the wife of whales
 most happy, happy she!
 and Venus among the fishes skips and is a she-dolphin
 she is the gay, delighted porpoise sporting with love and the
 sea
 she is the female tunny-fish, round and happy among the
 males
 and dense with happy blood, dark rainbow bliss in the sea.



Fin whale diving after coming up for fresh air. The marks
 against the sky show the remains of the spray and condensed
 vapour that he blew up.

Chapter Eight

Abattoir in a Gale



And through the drifts the snowy clifts
Did send a dismal sheen;
Nor shapes of men nor beasts we ken —
The ice was all between.

S. T. COLERIDGE: *The Ancient Mariner*

Abattoir in a Gale

THE Blue whale (Sibbald's Rorqual) is dark slate-blue on the back and mottled-blue flecked with grey-white below, but hardly with any yellowish tinge that would justify the old whaling name of 'Sulphur-bottom' even with the coating of marine diatoms that some whales collect in certain parts of the Antarctic. The Fin whale (Common Rorqual) appears dark grey-brown to black when he is swimming and has white underparts. He is a smaller whale, and, unlike the Blue, prefers to keep away from pack ice.

Our Blue whales now began to get scarce and we moved out from the pack edge to where Fins were more plentiful.

On the evening of 11 December, a northerly wind backed to the north-west with an increasing swell. A snow blizzard followed on the rising wind with a heavily overcast sky. By midnight, two whales remaining at the stern had been hauled up, and it was a whole gale with almost hurricane gusts, and our catchers, some with more whales, tried to keep the shelter of our lee as we lay with the wind partly on the port beam to help them. *Harvester* behaved beautifully, but flensing and cutting could not go on; the strain on winch ropes with the ship beginning to roll was too dangerous.

By four in the morning the seas were real ones, at times coming green to the scuppers at our tremendous bows. Not breaking, but the wind whipping spindrift from the tops of the great walls of water as they threatened to topple on us, and drove it icy cold across our decks. A half-flensed Fin whale was lashed down as well as it could be with wire ropes on the after plan deck; and ten-ton lumps of carcass wedged

up for'ard. Men could no longer hear each other shout. The wind shrieked through our rigging under dark scud clouds. Blood and water poured from the lee scuppers at every roll—Could this be the same world that had mirrored majestic tranquil icebergs in a glassy sea two nights ago?—In vain the catchers had tried to hang on close to us, but they were being beaten away and now out of sight in the troughs of the massive seas. I seemed to spend the hours between trying to prevent some of the hospital taking charge and going over the side, and scrambling through the factory to get to the wireless room to hear of any accidents with the catchers.

One by one they reported the loss of their whales. The plunging of the vessels caused the lashing chains holding them alongside to start sawing through the tails, and once that started, it was more and more like going through cheese. With no longer any catchers able to take advantage of what shelter we could give, we had slight way on, heading up into the wind. But the strain seemed greater, and with no breaking water it was easier the other way. For anyone to attempt to negotiate our flensing deck was out of the question. The great lumps of partly dissected whale were still held by lashings, but at every roll they threatened to break away and carry everything with them. I reached the hospital again from the engine-room. Periodic crashes of crockery and bottles occurred in spite of all efforts to hold everything tight. Still the demons of the air shrieked through the rigging and drummed through the gear on the boat deck, while all wild life on the sea or in the air had long since disappeared.

But to injured whalers in the hospital beds it was all part of the routine. The gale would pass, and perhaps one of these days a ship would appear with Christmas mail. But in the surgeon's bathroom a suffocating smell of formalin provided atmosphere in which pickled pieces of whale anatomy escaped from their containers to jostle embalmed

baby sharks under the bath. Shaving was no ordeal, as that habit had been given up, and the razor was not to be found anyway.

A full gale is not altogether a pleasant thing to experience in the darker hours in a thin-shelled ship, with icebergs on the move. But we thanked Providence and Robert Watson-Watt for giving us radar, and for a mercy kept clear.

By 8 P.M. on the twelfth there was a lull enough to let *Southern Wilcox* get up to our stern with two whales. The first had just been shackled to the wire from the factory, when with the stress from the heaving seas, the wire parted. The factory end caught one of the whalers Torval Megaard, but he had only a short distance to stagger to the hospital with a compound fracture of the arm. The catcher's end of the wire fouled *Wilcox's* propeller. She lay helpless for a time in the seas, and *Southern Foam*, our Penguin City friend, came up and stood by until in calmer conditions she was cleared. Both whales were lost.

Our catchers were by now getting seriously short of bunker oil, and fortunately we had now not far to go to reach the shelter of pack ice—Once inside the ice belt, the sudden calm was dramatic. First a great sea carpet of brash ice, the wreckage of floes pounded in the gale. It stretched away moving with the swell like a blanket over a restless sleeping giant. Further in, the more protected pans had not broken up to the same extent, and we left a track rather soiled by the paint from our bows and sides as we passed on with a steady, scraping swish.

What a game; blood, guts and beauty all in a huddle. But the whalers were always ready for their jokes. If a man came into the mess-rooms without cleaning the muck off his boots he soon heard about it:

'Would you have been whaling or something, Charlie?'

'No, he's been to the hospital, poor boy.'

The Norwegian lads were not always too sure of this banter, and a lot was missed on both sides by the language

difficulty. And from the mess-room direction in the evening after the shifts had changed would come the strains of *The South Georgia Exiles*. Composed as far as is known one Saturday night in Leith Walk close to the Company's headquarters and not far from the shadow of Edinburgh Castle, it was certainly developed at greater length under the winter blizzards of Leith Harbour. The chorus would be accompanied by knives and forks on the tables:

If you're fed up with life and you want to have a change,
just go down to Bernard Street, gie Salvesen your name.
He'll send you to an island, ye gods it is a beauty,
and all that you have got to do is just to do your duty.
But oh, dear me, what shall I do,
if I'm awa doon there and canna tak it?

Growler ice, the pieces of broken up bergs almost awash, and dangerous to vessels because of being, at times, so difficult to see, were scattered through the pack along with larger ice bits now; and the constant telegraph ringing—Dead slow—Stop—Astern, then Ahead again, with twin screws could be tiring for those in the engine-room. But the catchers got what bunkers they needed. Next day the gale had blown itself out and we returned to operations in the open sea.

The bridge, on more than one occasion, had committed the seagoing sin of altering the clocks without notifying all the departments on the ship concerned. But now it was the engineers' turn, and the ship's water supply seemed now a mixture of graks from the blubber boilers, fuel oil, and sea water, like a brew of rather ancient kippers. It really affected nobody except that it produced two hitherto entirely undiscovered flavours of coffee and tea, and it had to be filtered through twenty thicknesses of old towelling before it could be used for photographic work.

Killer whales, after leaving us in the ice, appeared again and played and feasted. The females with a few young

calves were only half the size of the males; but even from a distance the males were easily recognised by the enormous dorsal fin, in some standing up four feet high and more. Fierce as they might have been, their antics were a constant source of entertainment to us.

The operating room of the hospital looked out on to the deck at the stern, and one evening, after another accident had been fixed up, I stood outside watching the Killers tugging at the tongue of one of our Fin whales in the water below. They didn't seem very hungry however, as we had had a lot of whales in the day; and now as the sun was dipping, all the animals were happy and inclined to play around. I watched a Cap doo bathing himself, and suddenly something fell with a splash thirty yards out. It appeared to be a piece of whale tongue the size of a man's head. Immediately a Killer closed in on it, pulled it under and let it go. Then he turned and came to it on the surface. I thought he was going to leave it, but he suddenly turned half on his side and the tail flukes went into real water-polo action. The piece of tongue went high in the air to fall forty yards away. Two more dorsal fins charged in, and back came the 'ball' in another arc, closer this time. I just had time to see it was a bit of tongue when apparently the goalkeeper had it in his mouth and went off with it below the surface, to appear farther out.

The game was still going on when one of our catchers arrived with three more dead whales, to interrupt things by barging right through the polo ground. This reminded the players that it would be as well to keep up their athletic strength with a little more nourishment, so the game was given a half-time break for a combined sampling of the fresh tongues. But only for a few minutes, then they were back at play, until the fading light must have made it difficult for them to see the ball. They stayed with us as the weeks passed, but one game per week as far as I could see was the most they could manage in the way of fixtures.

Some of our young officers, not content with us having a seven-per cent share of the spoils, resented our taking a little of the pickings, although these were no more right to any loot than we foreign bandits. Their objection took the form of revolver bullets fired at the stern. Apart from any law of the high seas, the state of affairs had to be altered, not only from the injuring of the creatures, but the hospital area where men as well as other animals should be able to depend on getting some peace. The Killers then came to sense the whole situation, and at night would rest on the surface under the hospital port-holes. Their blowing was the first thing to bring me to my surroundings on each morning. But still the occasional shot went off and no one thought he could get in a quick visit to the water end.

There is a fine old tradition among some Scottish fishermen that a fishing vessel will have bad luck if the animals in the vicinity of operations are not allowed their share of the catch. So there were those of us of Celtic origin who were none too happy at these events. It appeared later in the season that our fears were not altogether groundless.

One by one the days passed, all too quickly for everything that had to be done in the study of the whales and the industry generally, in addition to the medical work. The hospital went along steadily with the number of occupied beds rising to seven by mid-December, although as a rule there would be only three or four casualties. Putrefaction was well advanced in many of the whales before they were cut up, and septic hands came along at intervals for treatment. From a scratch, reaction in some cases would run up to the shoulder in a red streak of lymphangitis in a few hours, but nothing more was ever needed than local treatment of the wound and soaking the whole arm in hot baths. Then the Senior Plant engineer, whose foot had got into a worm conveyor, had really made a job of it, with a lacerated boot

mixed up with a mangled limb. The companion ladders of whaling factory ships are not designed for the transport of wounded men, but Neil Robertson stretchers are excellent things. Tetanus antitoxin and anti-gas-gangrene serum have made surgeons' lives much less sleepless than they once were. And there were no worries from the abuse of such as penicillin. So in the best part of two months Nature had reconstructed the muscles of this limb enough to allow the patient on his feet again with a walking iron made by his fellow engineers.

December 24 was sunny with a light breeze from the east and some swell. Convalescent hospital cases were able to sit outside in deck-chairs with a blanket or two. No catchers were anywhere in sight of whales. There seemed to be goodwill between all creatures, and blessed peace compared with the days of slaughter, when with binoculars the pitiful struggles of whales harpooned close to the ship could be followed through their desperately long-drawn-out agony. Bergs drifted past, battlemented faery castles, gentle-sloped, snow-covered hillocks beloved of the penguins, and tremendous cliffs of beautifully blended curves as though the giant of the Antarctic had half-licked his ice-cream cone and thrown it into the sea.

Then came a smaller berg with the unusual sight of the waves breaking only as they rolled off it. The mass above water was a hundred yards square. Two forty-foot-high table-topped blocks divided by a great fifty-foot-wide, sloping, ice-gully chute. Each swell rose in a mass up the gully, descending faster down the smooth ice than a narrowed exit could take it, and piled up each time to break in a foaming mass until smothered by the next swell. A Leopard seal had discovered it as an ideal bubble bath and was having as happy a time as any Hollywood film star.

But our armistice with Nature was not to last, and in the light of another beautiful sunset the killing started again. When, after a time, the glare of floodlights came on, the

twilight outside seemed darker than it really was. As flensing was resumed, the great whales on deck were as superior beings from another sphere, surrounded by the little human creatures hacking at them in their puny, parasitic way. If the killing had been humanely done, the shambles would not have seemed so bad; but as it was it all seemed to be man at his degraded worst.

Christmas passed with no let-up in the seven-day week, and early January found us north-east of the Weddell Sea in 58° south latitude. On went the scramble where nothing mattered but the amassing of barrels of oil. I clambered out of my bunk in the early hours in another blizzard to rescue the tarpaulin and rudder of one of our lifeboats on the upper deck, for they could be heard from below tearing themselves loose. Whaling ships seem to be laws unto themselves in such matters. Lifeboat davits and gear were by now encased in inches of solid ice, and life-belts in the same state. Few if any of the men on any of the ships gave it a thought and when mention was made of it the attitude in general was: We haven't time. It's oil we are here for, and if a man falls overboard there isn't much you can do for him anyway in these seas. That of course was quite wrong, for our sea temperature was rarely ever below 28° Fahrenheit. Perhaps it is inevitable that floating factories are looked on as factories rather than as ships. Even to the owners, the Captain is the Manager. Just how such a floating community would come out of an encounter with an iceberg is not perhaps one of the things many captains number among their sleep-producing thoughts. Our Master had a very trying job indeed to contend with, involving problems never encountered by an ordinary seagoing vessel. Some of those making up whaling crews can be peculiarly childlike in their reactions, and most of those bitten by the oil bug would probably have resented time being given to such as emergency boat drill while whaling operations were going on.

Toward midnight on New Year's Eve, I stood at the stern. One or two Killers were blowing quietly in the distance. Three Fins were moored at the entrance to the ramp. Then again a little Chinstrap penguin clambered up from the water on to one of the carcasses; and as he rocked gently in the swell, the tinkle of the midnight bells came up from the engine-room. Standing there, he seemed a symbol of the whole Antarctic, that gently dozing wonderland, pondering even in her sleep whether this animal man would ultimately turn the whole world into a blood-splashed desolation. But Penguin standing on the body of his old friend was also the herald of something that would supplant it all. One little citizen of the polar seas, symbolic of the ages to come when Nature will again have triumphed and the survivors of the human race will have learned to obey her elementary laws of decency.



Antarctic Cup-tie. Berg City v. Weddell Sea Rangers.

Chapter Nine

Thou shalt Pay a Price



Bergs with gentle slopes beloved of the Penguins.

'God save thee, Ancient Mariner!
From the fiends that plague thee thus! —
Why look'st thou so?' — With my cross-bow
I shot the Albatross.

S. T. COLERIDGE: *The Ancient Mariner*

Thou shalt Pay a Price

ON 9 January now 1947 our first attendant oil tanker, *Southern Opal*, arrived from Britain. But the weather was too squally for her to come alongside, so she hove-to, two miles off. She had fuel oil for us and would then clean her tanks and take home our first sperm and whale oil. With our bunker tanks getting light, we were down by the head and hauling whales up the skidway was becoming difficult.

Walking up the plan deck in the evening on the way to the bridge, I stopped to speak to Nils Kverne, the planforeman, as he was screwing the unexploded head off one of the harpoons embedded in the whale meat. I was thinking it was as well the explosive was comparatively safe gunpowder when there was a shout from the bosun to stand clear. They were ready to jump-cut the spinal processes of the whale carcass to let the vertebrae get down into the cookers. This is done with a heavy sharp hook on the end of a wire rope from a forward winch. The hook placed round one of the bony processes, would, with the winch pull, cut through it and jump to the next; one after another, while the long wire cable would whip up and down, threatening to break at any moment. Occasionally the hook would miss a bone and fly through the air while everyone ducked and the cable went into leg-breaking coils. But I never saw an accident with it; the danger was too obvious.

Tom, the Third officer, waved down from the bridge and I went up to see him about one of the men who had not been able to go on watch.

'Aye, come up and get some decent air for a change, Doc. There's a mug of cocoa in there going begging.'

'Oh, grand—thank you, Thomas. My word, you take your life in your hands when you cross that deck at times. I don't know how men aren't killed every day.'

On the bridge, high above the noise of the winches and the steady clak-clak-clak of the meat elevators, the breeze was fresh and clean and the sea showed every sign that *Opal* would be alongside in the morning. Tom was a good lad, and would always note any strange bird or animal for me. But the atmosphere of whaling was not his idea of enjoyment, and he described it all as the only thing that had ever come close to making him vomit at sea. Not the smells or the mess, but the viciousness of it: 'Doc, it's the most degrading, cruel business I ever imagined anything could be.'

'Well, Tom, we have to remember the promoters of an outfit like this have had the rush for oil money ingrained in them for most of their lives. To them a whale is not the beautiful swimming creature you and I think it is, but just swimming barrels of oil. I suppose any individuals who were revolted by this business in the past just quietly left and went elsewhere. Yet these are the people I blame most, the ones who knew better, yet did nothing about it. What I can't understand is that nothing was done twenty or thirty years ago to get rid of the cruelty of this present harpoon. It has been used for seventy years now, and although better methods, such as with electricity, have been shown to be possible, they were never developed.'

'I don't think these gunner boys want to see much of a change, Doc. The way the animals suffer means very little to them and they would be suspicious of anything new that might encroach on the set up they have always known.'

'The gunners will be the key men for us to consult just the same, Tom. I used to hear it said, aye even in the days of the *Southern Princess* and the *Empress*, that they were pretty nearly directors of the companies too. But I must

go off with the catchers and see what they have to say about it themselves. I can't believe these lads would not do all they could to help us in anything that would overcome the cruelty involved.'

Tom went into the wheelhouse to take a bearing on a large berg that seemed to be closing slowly on our port bow, although still three or four miles away.

Yet all animals are so much given to habit and dislike of change. Anything of lasting value to make whaling a better thing would have to be taken up gradually to allow mental adjustments to a new outlook and avoid resentment.

Tom finished with the bearings: 'Aye, we are selfish, lousy organisms when you think of it, Doc. Look at this lot. They talk about a shortage of fat. If we stayed at home and took the blubber off all the great fat women and men that go waddling about the streets we wouldn't need to kill any whales.'

A penguin in the water below the bridge looked as though he had something he wanted to say too: 'Hello, lad!' we called, and: 'Fwaaak!' he shouted back. Our little fog messenger again; I was pretty sure I knew him well enough by now to know it was coming for certain when he said so. How did he find out? Did his pals far away elsewhere tell him through their little built-in telepathy sets that fog was coming his way? Or did the barometers in those small heads just record that the clearer night was not to last? And I wondered if our penguins and other animals were as insensitive to what we call colour as some of our biologists suggest. Surely the whales and seals could enjoy the sunsets too. Perhaps they see it all in much more delicate shades than we can.

Tom was attending to his iceberg again: 'I think we'll have to move a bit; that berg is drifting down on us. Slow ahead for a couple of miles until she is clear.'

A catcher was bunkering alongside and, along with our own crew handling the whales at the skidway, had to be

warned. A few minutes later the electric telegraphs rang and Tom came out again from the wheelhouse after giving directions to the quartermaster. Black smoke poured from our funnels against a hazy sunset as he leaned against the telegraph: 'And in the face of all this beauty, here we are, a stinking, smoking slaughterhouse of really bloody greed. Seven days a week, night and day, killing at a rate the poor brutes can't possibly stand.'

He was probably right, yet the International Whaling Authorities gave out that they were keeping a close watch for any sign of overfishing. It seemed not unlike an attempt to excuse what was against their better judgment, to justify a surrender to the one or two more aggressive types always ready to dominate proceedings; driven on by the urge for more and more wealth at the expense of generations to come, although some knew not what to do with that which they already had. What was more than likely to happen sooner or later was a sudden depletion in whale numbers with little or no warning, and a repetition of the tragedy of the Northern Hemisphere. And in this year 1947 it was to look as though the Blue whales were going to be the first to go unless complete protection was given to them, as for the Humpbacks, and for at least ten years.

The bridge telephone rang:

'It's for you, Doc. One of the engineers with something in his eye.'

'Righto! Tom, thank you for that cocoa.'

• • • • •

The wind shifted toward the north-west in the night, and, true to our penguin, next morning we were wrapped in fog, with whaling temporarily at a standstill. It was just as well, for we had overfished, and the last whales caught were putrefying rapidly although handled at the factory well within the thirty-three hours fixed by international

agreement as the time within which a whale must be processed from the time of killing.

It was becoming more and more obvious, the excessive amount of carcass destruction resulting from the use of the explosive harpoon. Whales killed humanely by lucky hits in the head or close to the heart were brought up to the flensing deck fresh even after lying for a day. But where the agony was prolonged by harpoons exploding in the abdomen, the intestinal putrefactive organisms apparently spread throughout the blood stream by the continuing heart action; and as the blubber was stripped off, the tissues below would be found turning green with decomposition sometimes even with a mere twelve hours from death. So that the yield of oil depended not so much on the size of the whale as on the number of harpoons used in the killing. When more than one harpoon had to be used, it almost invariably meant that the first had penetrated the intestines. This explosive weapon meant a waste far in excess of what would have been, had the old, iron, hand harpoon still been in use.

The occasional lack of whales at times had a strange, depressing effect on some of the Norwegian whalers. They couldn't even explain themselves why it was that they would sit around with this 'whale sickness' as they called it, apparently thoroughly miserable. Why a day or two of idleness in a seven-day-a-week business of this sort should upset anyone is difficult to say, except that they have almost no other interests to occupy them. It would have had to be a very bad season before their finances were affected to the extent of threatening the future of their families. I have known the fishermen at home day in day out have far more cause for depression than any whaler ever had. It would seem to be a peculiar attitude of mind of the few, although a general 'oleomania' affected the whole industry to a greater or less degree from the high-ups to the mess-boys.

* * * *



Our weekly cup game. The goalkeeper with the ball.



Southern Wilcox in choppy seas.



In the long cold dawn hours we waited for news of *Simbra*.

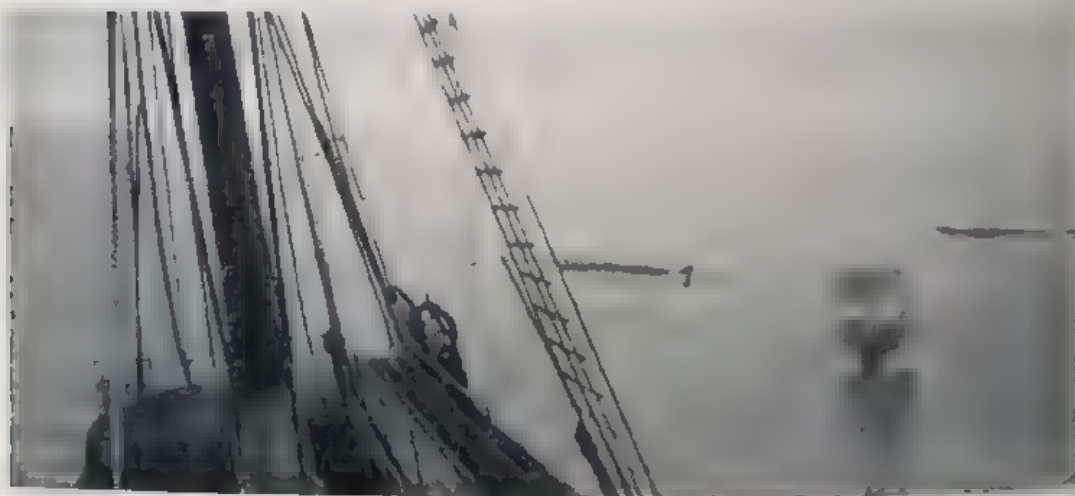
PLATE 14



At the time of the first shot the whales were and still are.



Ahead the Fin whales were swimming quietly but had now stopped feeding.
Ice was forming on our rigging.



I was not expecting the crash of the gun; but the harpoon ricocheted off the
back of the nearest whale and exploded in the air.

As the fog cleared, killing was resumed, to go on steadily. Until Sedna, the guardian of all the sea creatures, apparently could stand it no longer.

On the evening of January eleventh, *Simbra*, one of our best catchers, failed to answer the wireless telephone evening call-up. At ten o'clock next morning her lifeboat with one survivor, a young seaman, John Leask from the Shetlands, was picked up by another catcher twenty miles from the factory. He was alone in the boat with the bodies of three companions, the Mate, Radio operator, and a fireman. One, out of a crew of sixteen. The rescuing catcher *Sahra* had searched in vain for any further survivors and then made for the factory. The bodies were brought up first, and I went down expecting to find John only half alive after his exposure, but there he was in *Sahra's* galley mess room, in excellent trim apart from some slight frosted patches on his hands. He wondered why we were going to have him in hospital even for a day.

The whole story will never be known, but John gave me his part of it as well as he could. Events that led up to it are uncertain, but apparently the catcher had been in amongst whales, and rather than lose them while the going was good, bunkering had been put off to beyond the usual few days period, and these vessels get some stability from the fuel oil in the tanks. At seven o'clock at night she was chasing a whale downwind in the open sea with no ice in sight and John in the lookout barrel. A sudden hard-over turn after the whale had been more than she could take and she flattened out and failed to recover. John clambered out of the barrel and walked along the rigging to help get the one available lifeboat away. It was filled with water at first, but baled out enough to make a start. Half a dozen of the crew had gone shortly after the first icy immersion, but the Gunner, Chief engineer and one or two others were in the water, still clinging to the rigging. As they struck out for the lifeboat, both Gunner and Chief engineer were overcome

and sank. Six others were ultimately got into the boat, and John felt at the time that the catcher took about fifteen minutes to sink.

With clothing soaked in icy water, the temperatures were too low for survival, and one by one the men died and were put over the side. The last three of the six others in the small boat were dead by eleven p.m., and John by himself could not manage to get rid of the bodies. He simply said that for the rest of the night and next day he sat with his back to the wind, the boat half-full of water, banging his hands together to keep some heat up.

Not until fifteen hours after the accident did the rescuing catcher spot what she thought was a dead whale and the survivor still had energy to wave an oar. This lad, who had fortunately been on lookout with heavy clothing, had a man's share of the right philosophy and courage and had come through none the worse. After a sound sleep in the ship's hospital and another day quietly reading as though nothing had happened, he went to work one of the winches on the plan deck of the factory.

The catchers hove-to at the stern of *Harvester* while Captain Begg read a service and the three bodies brought in were put into the sea again from above the skidway.

Whaling went on as before; and even after this accident, the suggestion particularly to the catcher crews that they should have warm clothing and lifejackets handy especially in bad weather seemed to mean little to them. You can't turn lifejackets into oil.

Chapter Ten

Sedna Triumphant



It's good to have money and the things that money can buy, but it's good too, to check up once in a while and make sure you haven't lost the things that money can't buy.

GEORGE HORACE LORIMER

Sedna Triumphant

Southern Opal had been able to make fast to us after we had fixed three whale carcasses as fenders alongside, and the transference of oil was completed by 13 January, when she sailed to rendezvous elsewhere with our sister ship, *Southern Venturer*. To use anything smaller than whales as fenders in the open seas of the Antarctic would be to risk damage to both ships involved; but by the time we were finished with the fender whales they were so stinking that only the blubber could be used. Our whaling inspector gave permission for the remainder of the carcasses to be cast adrift, and glad we were to see them hauled back down the skidway by the stern winches. In my cabin close by I could tell the minute a badly decomposed whale was brought out of the water; the smell would waken you even in the night.

Captain Harold K. Salvesen, known more often as H.K., and the chief in the Company, had come down with *Opal* and transferred to us by catcher earlier, bringing the first mail-bags with him. Some weeks he stayed with us, and quite a few discussions we had over the harpoon problem—I gathered he had investigated a form of electrical harpoon some years earlier, when enthusiasm had apparently not been stimulated by a gunner stepping on a faulty cable with wet sea-boots! Then there was the story of the whale that was stunned, but nobody ascertained whether or not it was dead before it was lashed alongside the catcher. When it recovered and set about damaging the vessel, it was the idea that was condemned instead of the way it was handled. Captain Harold felt he was past the stage of having any more experiments tried in that line: 'But

...and, Doctor, and see what you can do by all means.' At meal times we had our arguments too, Captain Begg presiding with his quiet smile at the head of the table. In the battle for a humane harpoon that has gone on ever since, through the various stages of enquiries and research into all the possibilities, H.K. must have disagreed with many of my ideas. The apathy, and even hostility in some quarters, to the bringing of humanity, as we call it, into the industry have at times been pathetic. But when at one or two whaling discussions in Britain the new ideas have been labelled as fanatical and I have been credited with more than my share of bees in my bonnet, Captain Harold has taken my part when he might well have done otherwise.

Through January now we were working along some distance to the south of the South Sandwich Islands and heading toward Graham Land. The middle of the Antarctic summer and the temperatures with northerly winds were often above freezing; the scene one of real beauty. Indescribably lovely ice colourings by day and flaming dawns and sunsets; blotted out frequently by days of fog and bad weather, but enhanced the more by contrast. A mystic land where the squabbles of man as they came to us over the wireless from far away civilisation faded into insignificance. I would turn on the radio after supper to get the news. . . . Big Ben . . . 'This is the B.B.C. South American Service. Here is the news. . . .' A winter of unheard of severity in Britain—snow, strikes, and strife. Men seemed to be snarling at each other in many places. Well, well, the penguins did the same of course but in such a nice, quickly-forgotten way. But given time, men might learn to be like penguins too—I was reading Eric Shipton's *Upon that Mountain*:

In the Karakorum we got the shattering news of war. How fantastic and supremely ridiculous it seemed in our remote and lonely world of snow and ice. At least this mountain world to which I owed so much of life and happiness,

would stand above the ruin of human hopes, the heritage of a saner generation of men.

And Admiral Byrd on *Operation Highjump* had written:

Antarctica has higher values than money. . . . No music like the toneless years of accumulated silence. Here one may escape for a little from the chaos of civilisation into the silence and harmony of the cosmos and for a moment be a part of it. But the greatest value is an intangible and inexpressible spiritual one.

The vastness, clearness, whiteness and silence and purity. The elevation above the petty quarrels and ambitions of men and nations combine to form a majestic symbol of what men should want most, peace on earth.

Yes, peace on earth, but surely not only between man and man, but peace between man and the other animals. A nation is just as much an aggressor if with wanton cruelty it attacks the other creatures that share this earth with us. As a breed we have the most vile sins. We trap other animals to steal their very skins. We shoot others for the fun of seeing them die. We hunt creatures to death, after first making sure they are weak enough not to be able to hurt us in return. And we fire mutilating explosives into the whales in the name of big business.

The wireless news went on. Men fighting to get rid of a feeling of inferiority by trying to get control of the ordering of the lives of others. Other masses, after getting rid of their old masters, were finding the new idols they had set up more evil than the old ones, and feeling lost, and scared now in an unknown wilderness, were hitting out at imaginary ghosts. Man who had turned his back on Mother Nature could find no refuge within the orbit of his own milling species. And in his fear was sinking without protest into the slime of new slavery worse than he had ever known.

I turned off the set and stepped out into a blood-soaked welter of entrails, ribs, jawbones and massive lumps of

flesh being dragged in all directions. Was this Admiral Byrd's Antarctic? Was this the Antarctic that held the names of Bowers, Oates, Wilson and Scott? No, others had come, and where was the whiteness, silence and purity now?

Around the stern of the factory we had been invaded by hundreds of tiny sooty-black Wilson's petrels, with their little white rumps. Dainty sprites of the ocean only very rarely at rest even for a second on the water. All the time just flit, flit, flitting on little moth wings, picking the oil globules from the surface. What a refreshing tonic it was to watch them and to feel perhaps that Nature had not given us up entirely in disgust.

In mid-January, south-west of the South Sandwich Islands, the Killer whales suddenly deserted us. Why, was difficult to say, for we were still getting whales. But up to now through this season not one catcher had seen a single one of last-year's born young. Normally at least a few young Baleen whales should have reached the Antarctic with their mothers by January. The gunners could not recall them having been entirely missing before.

I made two short, preliminary trips with our catchers to find out photographic and other conditions before studying the catcher work in greater detail. Snow flurries made visibility poor, and as we chased, it seemed so often that the Power of Creation, concerned with the welfare of all, let us go so far, then put a hand up and drew a veil of snow to cover the retreat of the harassed whales. But the first Blue we got was fortunately killed almost instantly by a lucky shot, only, however, after she had been hounded with her mate for two long sickening hours when toward the end their distress was pitiful. There is something so lovely in the motion of a great whale swimming before it becomes in any way frightened; and it seems an impertinence for men even to approach them with anything but feelings of deepest respect. But the mentality of the greater part of the industry revolves in a bovine vortex of oil.

On the second trip an Antarctic skua, the first seen since leaving South Georgia, tried to settle on the gun as we returned to the factory.

As I crossed the plan deck on *Harvester* again at midday, the men had gone for lunch and the last whale had been almost cleared. But one large lump of meat and bone of about two tons lay not far from the galley. In the quiet of the lull in operations, one of the young cats, a half-Persian, approached this mountain of flesh. He set his teeth in one corner and turned to walk away. The two tons refused to follow. He turned round and glared at it, then, firmly setting four feet against the deck, tried to go full astern, with eyes the nearest to going crossed I have ever seen in a cat. Still the two tons remained where it was. Persian's tail-end then skidded and he sat in a mess of blood and oil. I didn't hear what he said, but he let go, licked his hind legs hurriedly and took a fresh grip. This was just the most damned stubbornest bit of steak he had ever been up against. After another fruitless effort, he chewed at the piece he had gripped, then reached up with a paw and clawed it free. Now for the warmth of the galley. Half-way there he stopped for a final glare back, and I swear he was muttering to himself as he passed me with a Don't-see-what-you've-got-to-laugh-at look, and disappeared with his very small portion of the two tons.

By the end of January we had worked west right across the northern part of the Weddell Sea to the South Shetlands, and on the first of February, Clarence Island appeared out of the haze on the port bow. As visibility improved, Elephant Island lay away on the beam, its great snow-covered slopes with bare cliff faces frequently hidden by snow flurries. It was on one of its more open beaches that Shackleton's men had been marooned during part of War I after *Endurance* had been lost in the pressure ice five hundred miles to the south of us. Now as night came on, a full moon hung like a great dull-red lantern in the haze to the east. Next

day it rained heavily: probably precipitation caused by the mountainous islands in the proximity. Then once again the fog closed in.

We were getting only Fin whales now in this area, small and very lean. The external colouring of the upper parts was unusually dark brown. The question of them being a distinct variant from the other Fin species has been frequently considered. The whale food, krill, the shrimp-like *Euphausia superba* of these Antarctic seas, lives on the tiny phytoplankton life of the ocean currents. The Discovery Investigation Organisation, now part of the National Institute of Oceanography, under the auspices of the British Admiralty, devoted many years of work with its research ships to the study of the life of these creatures. Their findings show that the adult krill follow the surface water drifting toward the north-east as a cold current out of the Weddell Sea. The eggs and young during a two years' development apparently keep to the deeper, and generally more salty, warmer-water layers which have carried them south from where they were spawned. With the known distribution of the currents in the Weddell area, the krill available for the whales we would expect to be young, just coming into the start of adult life, but hardly having got a start on the rich phytoplankton grazing of the upper sea layers. It was perhaps not to be wondered at then that our whales were thin.

Our catchers hunted right in to the Bransfield Strait and in the next two weeks we worked east again while our store ship *Saluta* paid us a visit from Britain after a call at South Georgia. And through it all the Cap doos continued their daily guzzling on the water.

The fourteenth of February will live in my memory as the day the animals put on their greatest show. We were in an area 150 miles south-east of the South Orkneys, and close to a collection of about a dozen icebergs apparently stranded on a submarine ridge in water that the chart showed as two

hundred fathoms. I called it Berg City in my notes, and it was an excellent place for catchers to shelter in bad weather. We were working along the edge of pack ice, when two Minke whales, the smallest of the Rorquals, played hide-and-seek on the surface while feeding. Up and down the water lanes in the ice, while a flock of Cap doos followed them to pounce on bits of krill left on the surface each time the little whales came up. Then the Killers, once more with us, had their circus turn and stood on their heads, tails out of the water, while twice I saw the doos pounce on titbits adhering to the great flukes. Silver Grey and Snow petrels planed across our bows, all happy in the warm sun. Then far in over the ice a Leopard seal pulled out on to a floe, saw this human ship contraption, and decided to investigate. Into the water for a hundred yards, then half out on another bit of ice to look again. Until he was two or three hundred feet from the ship, when he had a long quiet inspection. I was concerned in case some idle member of the crew might want to show his bravery by using a rifle, but Leopard was ultimately satisfied we were just a floating hulk of rubbish and slipped away safely.

That afternoon as a headwind sprang up and we moved eastwards at about five knots past Berg City with all our catchers out of sight below the horizon ahead, a concentration of Fin whales appeared astern moving rapidly up on us. Counts on the bridge varied from one to two hundred, but as near as I could estimate as they passed, forty-four led in line abreast, twenty-seven passing on our starboard side, the other seventeen to port. Then a gap of quarter of a mile before an isolated three to port. Another short gap and two rear groups of five each close on each side of us. Fifty-seven in all, and as the whole formation cleared ahead they seemed to sense that all might not be well in the direction they were going. With one accord, they altered course four points, disappearing away to the south-east beyond the pack ice. Not a catching vessel anywhere within call, and to see these

beautiful animals swimming along with nothing to disturb their gladness in living was one of the happiest and most thrilling experiences I have known. I just felt like tearing up to the mast-head and yelling them on. What a sight it was. I have known crews that would have broken into rousing cheers of good luck to them as they went. That great female in the lead must have been close to eighty feet and she seemed hardly to go any deeper than just skim the surface.

I think my eyes were perhaps just a little blurred with sheer happiness, but could that possibly have been Sedna herself seated side saddle on that leader's back? Hair streaming in the breeze, the Goddess patron of all the creatures of the deep. Sedna riding triumphant, so what had anyone to fear? They ignored the factory completely, and when they had gone, blended with the distant sea, the same loneliness I had known on leaving Penguin City returned. Alone once more on a strange ship, as though left behind by old friends. Could my fervid hopes for their safety have had anything to do with the fog that came down from the north with the dropping of the wind two or three hours later? As it crept over a great iceberg five miles on our port beam, ice halation flared into the mist above it in a crown of light, while a catcher approaching on a now calm sea was a tiny foreground speck in the immensity of it all. The whole day seemed symbolic, just as was the little Penguin on the whale on New Year's Eve, that Nature in the end would triumph over the evils perpetrated in this beautiful land.

It took two days for the fog to clear this time, then morning broke with a calm sea and glorious sunshine. A light-hearted remark at breakfast: 'Aye, a fine day for a massacre'—cut like the stab of a knife to spoil it, and even the food seemed tainted in an atmosphere that made you feel ashamed.

Our catcher *Solvra* now returned from boiler repairs at South Georgia, bringing Christmas mail delivered to the

island on the arrival of tanker *Southern Collins* from England. It became like Christmas Day in the hospital, the men digging into their letters, with a howling wind outside and the port-holes snowed up. But the welter on the factory deck went on steadily, and the doctor, doing biology, wading at times up to the knees in entrails in the pursuit of whale pituitaries, ovaries, pancreas or thyroids for research, had always to find his specimens with the minimum of delay in this battlefield, if they were not to be lost with everything else down the deck manholes into the cookers below. And when my feet went out from under me on a piece of slippery whale tongue, the mirth of the boys seeing the 'quack' sitting in six inches of blood and guts was anything but half-hearted. But I found them always interested and extremely helpful in the search for anything unusual. Whenever an unborn baby was discovered, they had it saved on one side, and when operations became less rushed, would gather round, always keen to see the dissection of this whale in miniature. They were good lads, Norwegians and British both.

Chapter Eleven

So This is Whaling



The animals are our fellow dwellers on this earth; and if we met on Mars we would be surely drawn to one another like fellow townsmen meeting in a foreign land.

GREY OWL in a note to the author

So This is Whaling

As DAWN was spreading on one of the later summer days of February, after a visit to a quietly sleeping hospital, I swung on a rope from a sally-port on the ship's factory deck, out on to the deck of one of our faster catchers, *Southern Wilcox*, and found Johan Borgen the gunner putting the factory ship's position on the chart. He was a great, bearded buccaneer of a man straight out of *Treasure Island*, with the largest hands I have ever seen on anyone who was not an acromegalic. A Norwegian, but with his home in Newfoundland. I liked him from the start, although there were those of his own countrymen who said other things about him, but I was soon to have my opinion enhanced by both his skill and his cleanly habits on his ship.

We cast off, and with engines of over 2,000 h.p. capable of driving us at fifteen knots, our foaming bow wave was a soothing sound after the din of the factory we had just left behind. The calendar seemed to have jumped back twenty years to the days when those fish had to be gutted in the cold dawn on a trawler's deck between Orkney and Norway. But so much more was involved this time. Lying in my bunk next to the hospital on *Harvester*, I had tried to look from all angles at this problem of the killing of the whales. Was the cruelty unavoidable? Why were nearly all the whales harpooned in the abdomen, involving the bursting of the intestines and the wasteful putrefaction of the meat? Occasionally a whole whale had to be thrown away, all except the blubber. Now as we made weaving S-tracks to avoid dangerous ice edges amongst the open pack, I had hopes of getting the answer.

There had been those two previous occasions when I had boarded the catchers of the older type: but with a speed of only twelve knots, chasing had been often a long, unpleasant business. For a fresh whale running hard can keep up over twelve knots for an hour before he begins to tire. And these creatures are well aware of what a catcher means to them.

It was then that late one evening we had approached a group of Fin whales amongst loose drift ice. They submerged, and we stopped to see which direction they would take next. Suddenly one surfaced right alongside our plates, apparently taking our hull for another whale. The gun could not get round anywhere near him. After moving close round the stern, where he was probably curious about our propeller, he quietly disappeared and we never got near him again. On that trip two Fins had been secured, when twenty and thirty minutes had been the time taken for them to die after the first harpoon. Two other whales had been lost after harpooning. Both had cut the harpoon rope in the catcher's propeller as they dived and turned back under the boat before the engines had stopped. And by the time we had been able to get the trailing broken rope end in and get after them with second harpoons, they had died and sunk out of sight.

Now on *Wilcox*, after nearly three hours steaming, the factory was thirty miles away, and far on the horizon ahead in open water beyond a stretch of pack ice we could see a tiny dot emitting occasional bursts of thick black smoke. Another of our catchers chasing a whale. Borgen seemed to be paying little attention to the sea as we stood on the open bridge discussing this explosive harpoon and the futility of trying to put the resultant whale meat on the market. It would make little difference how quickly the whale was cut up after death; in every case where the intestines were mutilated the meat was likely to be infected. In Norway an attempt was being made to train

gunners to hit whales only close to the head, when death would be almost instantaneous; but in the seas of the Antarctic it was a more difficult problem. There seemed only one remedy. This explosive harpoon had to be scrapped.

Our telegraph rang for—Slow, as we approached the edge of the pack. One or two lanes showed in the ice, and as we slipped through close beside an occasional Leopard on a pan, he would raise his head in mild interest. And, sharing one pan with a very large Leopard, three penguins stood solemnly, paying no attention to him whatever. A Leopard seal lying out on ice is not a hungry person, and the little Chinstraps knew it fine. After three miles the pack ended abruptly as it had started. Open water once more.

Casually the gunner picked up his binoculars and looked away some miles to starboard. He had apparently missed nothing as we talked. Then just a quiet word to the man at the wheel and we turned away at right angles, while the engine room telegraph rang for—Full ahead—. The lookout in the barrel would soon see what he had missed. I could see nothing for the first minute or two, then some miles away ahead to the north west a single vertical jet of fine spray followed by three or four more. A school of Fin whales, apparently feeding. While still a mile away we dropped to half-speed, for engine vibration would quickly scare them. But they seemed to sense something strange and disappeared for three minutes, to come up farther to port. They were still not running away, but had stopped feeding. The camera was ready under my windproof jacket, where I was trying to keep life in my finger-tips at the same time.

Borgen had now gone down over the flying bridge or catwalk to the gun platform in the bows to release the gun swivel lock and cock the trigger to be ready for any chance. They might surface anywhere now, as we had gone a bit beyond where they had appeared last. An engine-room telegraph extension was in the bows beside the gun and all

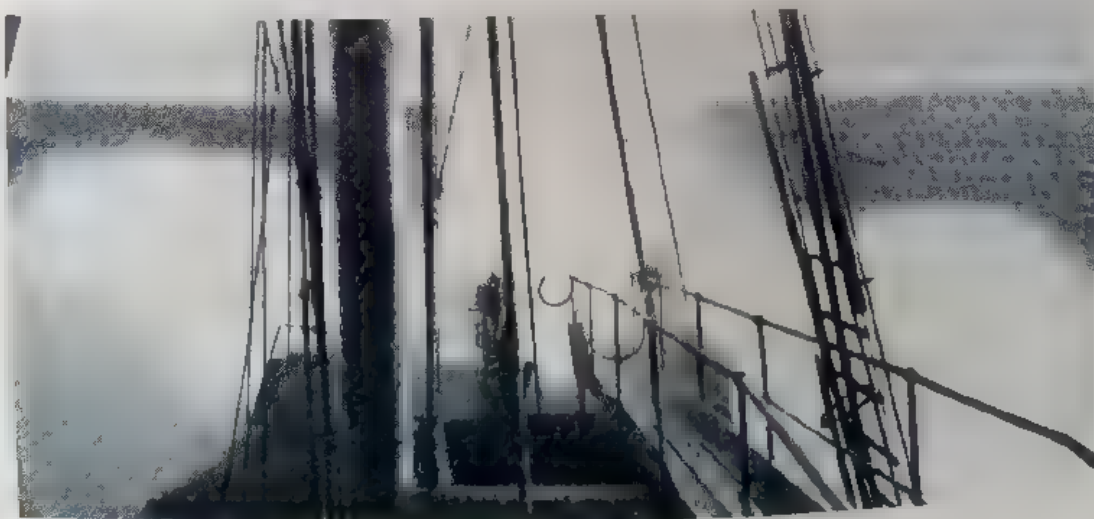
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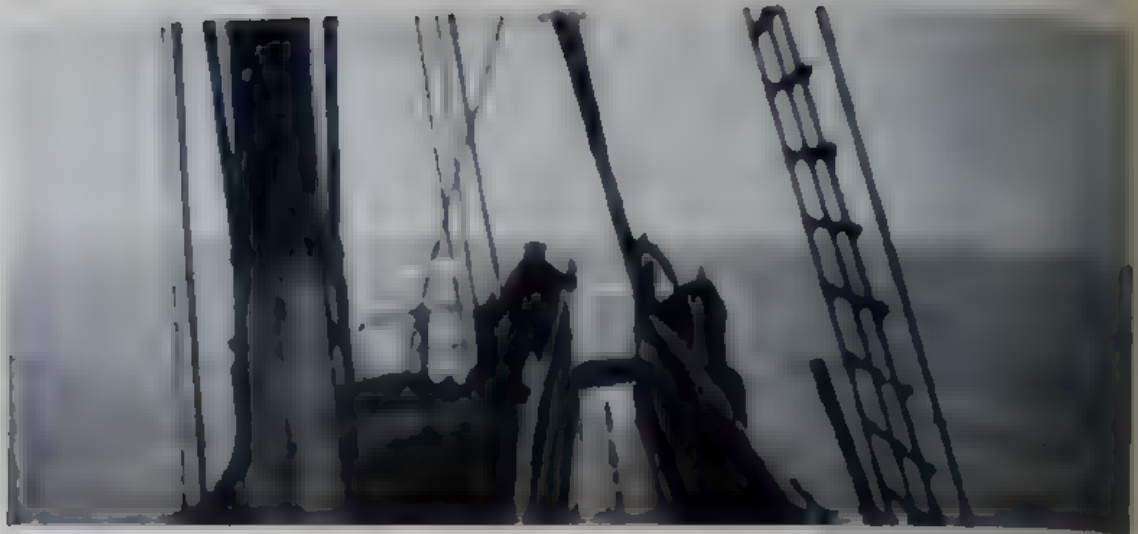
Fin whales running hard.



But a school never seems to take the same avoiding action that just two, or a single whale will use.



In freezing weather it can be a cold, cold job.

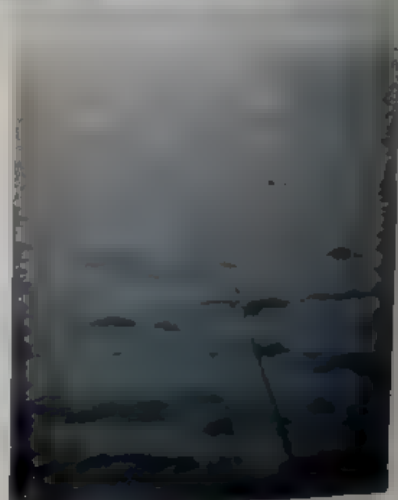


Copy 11—The gunner drops the harpoon at the whale from the gun platform.



A sickening slap as the harpoon disappears in the whale's back.

Half an hour passes and the struggle of a creature in distress goes on.



the steersman back on the bridge had to do was to follow the gunner as he raised his arm, port or starboard.

We maneuvered with the whales first on one side then on the other for the next ten minutes, when the lookout in the barrel suddenly shouted: 'Coming up!—Coming up! Starboard' pointing down as he shouted. The gunner was ready in the instant after a glance up at the barrel. But a slight ripple was all that showed. The whale had changed his mind at the last moment, probably on seeing the keel of the catcher, and gone down again without breaking surface. He probably came up quickly again in our wake, but nobody saw him.

Three minutes later two blasts as of escaping steam made everyone again turn to starboard as two ten-foot jets shot up and great bodies just broke surface. They were still in no hurry, and as always with quietly swimming whales, there was little of them above water, although the length of the backs showed from head to dorsal fin. They were a good forty yards away, and I was not expecting the crash of the gun in the midst of sighting the camera.

As the foregoer rope flew out, snaking behind the harpoon in a falling arc, the aim was as perfect as it could have been, but as it struck the whale, just behind the head, the harpoon nose had lifted and only the shank hit the slippery blubber, to send the harpoon ricocheting up. The grenade head exploded in mid-air and we ducked to avoid the shrapnel pieces that flew in our direction, while the helmsman had the wheel hard over to keep the free rope from fouling our propeller.

That was the end of any quiet swimming on the part of the whales. They were off and running hard. But a school of them never seems to put up the speed that a single whale or a pair alone will make.

After five minutes lost in winding in the rope and spent harpoon, while the lookout kept track of the running whales, we were away again. Full ahead all the way this

time, and as we closed in, one whale coming up fast, broke surface with the whole head and lower jaw out of the water almost in the foam of our bow wave; too close in for the gun to be trained.

It is a thrilling sight to see great whales at this close range, and always to me the very thought of mutilating them is just horrible. With a fast-running whale, a hit in a vital spot is very difficult, as the top of the head shows only for two to three seconds as he blows. Our next one broke surface ahead and slightly to port at thirty yards range. The only reasonable target was the back and side as he arched himself and paused an instant on the dive. Again the crash of the gun, and this time with a horrible, sickening slap, the heavy 160-pound harpoon disappeared in the creature's side, followed a couple of seconds later by the thud as the grenade head burst inside. —'Fast fish!'—The great animal quivered at a stop for two or three seconds, when I thought he had been killed. But a moment later the initial shock had passed and he had started for the depths with the one-and-a-half-inch diameter foregoer rope racing out over the pulleys followed by the heavier two-inch diameter main whale rope.

Three hundred fathoms before the strain slackened, and well over quarter of a mile away a spout went up as he surfaced. Down again, and the travelling tell-tale line pulley on the foremast, connected to some tons of heavy springs built into the bottom of the catcher, was the indicator of the stress on the rope. And as it retreated up the mast again when the pull slackened, the steam winch in the hands of the catcher's chief engineer started winding in.

The whale had obviously been hit in the intestines, which invariably results in extreme agony in a mammal. We were being towed now at about two knots, and as time went on with the whale weakening, the catcher hauled herself nearer and nearer until the gun could get to close range again loaded with a second harpoon. Down he went in his

continuing efforts to break away. Up again at shorter and shorter intervals while blood ran from the wound hole. The harpoon had pulled partly out, as usually happens with the stress, but four blunt, swivel, spreading barbs behind the head of the harpoon held below the tough outer blubber and there could be no getting rid of it.

Then out of nowhere, flitting over the water, appeared one of our tiny, dusky, Wilson's petrels, attracted by little globules from the blubber with the blood and debris of this pathetic struggle. They seem too delicate to be called birds. Yet once their brief visit to the nesting site is over they are apparently at sea night and day for the remainder of the year. Such endurance in these little wings is one of the things beyond our understanding.

Forty minutes passed and the straining of the stricken whale went on, until at length, with a second explosion, another harpoon was sunk into it nearer the head. The whale went down in another dive. On a previous occasion, from the lookout barrel up on the foremast of another catcher, I had taken photographic records of the last struggles and prayed for death to hurry to the relief of the creature. The spouting now was getting much weaker and a crimson tinge of blood spread through the fine spray of the next blow. Then darker, until a five foot jet of almost pure blood rose from the widely dilated blow-hole. The next jet was only three feet, then just a sickening bubbling. The great animal turned on its side—dead. Fifty-five minutes from the first harpoon.

Close in under the bows now a perforated iron tube connected to a compressed-air pipe was pushed right through the blubber into the body and the carcass inflated with about a hundred and fifty cubic feet of air; the hole then plugged with waste. A light line with a small marker float then attached to the tail, and after a bamboo pole carrying a flag with the catcher's identification mark had been stuck into the carcass, the foregoer rope was cut loose

close to the harpoon and the whale left adrift, to be picked up later. Sometimes a small electric light is also attached to the flagpole to allow location after dark. And now a British firm has produced a new marker buoy, which, attached to a floating whale, transmits a radio signal audible up to thirty miles.

We set off to try to locate the same school of Fins again. Our radio operator had already reported the kill to the factory by the usual code system, in case rival ships might be tempted to encroach on the area. It was an hour later before we came in sight of whales again, but doubtful if it was the same bunch. As the catcher approached once more, this school was joined by two other whales, the lot suddenly turning back in our direction. They crossed close in front of our bows and the gunner got the harpoon in broadside. A much more humane shot. Ten minutes later the great head and part of the back rose vertically out of the water, hung motionless for a second and sank back. This seems to happen fairly frequently, as just prior to the moment of death the creature's balance mechanism fails.

I stood beside the gunner as the whale was hauled in:

'Mr. Borgen, just what would all this be like if whales could scream?'

'Well, Doc, the whole business perhaps would stop. Not many people could stand it at all.'

Baleen whales have apparently functioning fibrous banded structures in the region of the vocal chords of other mammals, but so far, of the whole whale order, only in porpoises has the production of what humans can pick up as sound been confirmed: although the deep rasping cry of a dying harpooned Sperm whale is reported as apparently being heard at close quarters while the creature was being photographed underwater by Austrian zoologist, Dr. Hans Hass.* It certainly seemed likely that if the agony of whales had been other than silent to us down those years of slaughter,

* *Life* magazine (international) 30 Nov. 53.



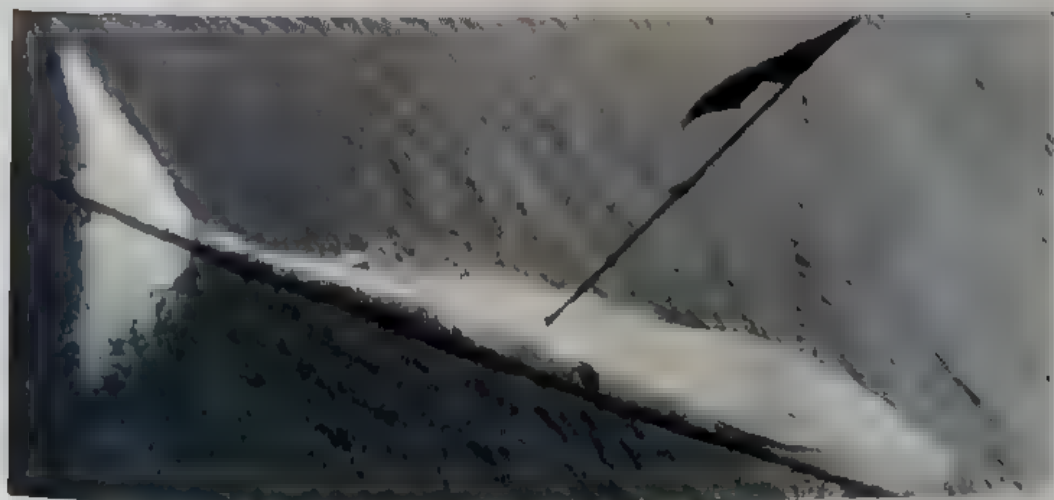
A short piece. Looking down from lookout barrel on whale nearly played out.



After a second harpoon the spouting from the widely dilated blowhole is very weak.



The end at last.



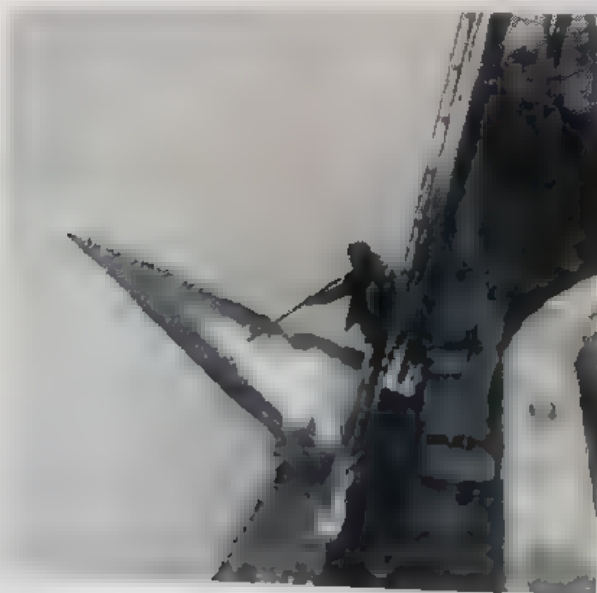
The body inflated with air and flagged.



Harpoon in the air as another Fin whale swimming for its life is overtaken by the catcher.



Where the harpoon has difficulty in following. Stretches of close pack ice into which the Blue whales may sometimes escape.



Securing the last whale for towing to the factory. The tail flukes are cut short.



Leopard shows mild interest as we pass through his bit of ice.

something would have been done about it long ago. The old hand harpoon of last century was no less humane than this present vicious weapon, for the whales died then from fatigue and loss of blood. Although it was a much more prolonged business, there could not have been the same extreme pain of lacerated bowels. Internal explosive rupture is far more cruel in whaling than it would be to a man in the same circumstances, for in a whale wound shock gives no relief. There are records that before World War II, the Norwegians also had done some experimenting with electrical harpoon gear, but for some reason the whole matter was given up. I have asked many of their whaling men why this was so, but could never get any explanation other than—'It was not satisfactory.'

The weather was changing now, following a period of calm with blue skies. Low, wispy strato-cumulus cloud began to drift out of a greyness in the south-east and the temperature dropped several degrees. This second whale was inflated and flagged, and an hour later a third secured after a struggle of thirty minutes. It was now time to get back and pick up our other two whales, now many miles away, before there was any danger of losing them should snow flurries come on. This risk is run too often when hunting is good, and results in the loss of many carcasses each worth £2,000 sterling or more. Such losses may at times be as high as ten per cent; and this wasteful depletion of the stock can only be stopped by severe penalising of the offending boats. But Borgen was taking no chances; *Southern Wilcox* would do no more flagging.

The tail of the last whale was secured by a lead-weighted throwing line and pulled in alongside the foredeck to be secured by a heavy chain passed round it through a special hawsehole. The great tail flukes, seventeen feet across, were cut short, as they are a nuisance in anything but calm weather, and we set off back to the position of number two.

The gunner's navigation to keep record of flagged whales

was with an old stub pencil on the woodwork of an upstair on the corner of the bridge. It looked like an amateur's piece of doodling, and the few directions given to the man at the wheel seemed equally casual. But we picked up that second whale without having to look right or left, and in straight steaming for another hour were within a mile of number one. And not only is it a case of locating the original position, but with the motion of the sea, there is a sculling action of the rail flukes which may carry the carcass a long way from where it started by the time the catcher returns. How all this was kept track of in the process of chasing, with the course altering at times every two minutes, was a mystery to me; and a query on the subject was just answered by one of Borgen's quiet smiles.

The factory had moved her position while we had been away, so it had to be another direction-fix by radio. Back came the steady bearing note from about twenty-five miles away by its intensity, so she must have been coming toward us. Our speed back would be quite a bit reduced by our three towing whales.

The sea was a bit more choppy now, and spray began to freeze on our plates above the water-line. My fingers were relieved that the more delicate camera work in the open was done; and a hot meal in the mess-room was a welcome break. Then came a game of chess with the gunner. I used to think I could play chess, but Skipper Borgen's game was as good as his navigation, and my ideas altered speedily. Then far off in the lee of a field of pack ice the factory showed up, and in under an hour more our engine room was at 'Stand by' again.

Half a dozen Fin whales were moored at *Harvester's* stern, and the little moth petrels dip, dipping over the washings from the skidway in company with the inevitable Cap doos. The nesting season was well past, and they were with us in a great flock. Our two starboard whales were handed over, but the one on the port side kept as fender

during the taking on of stores. But as we waited for another catcher to get clear to let us tie up, a bit of swell made us roll with what seemed a long-drawn-out recovery that I wasn't very happy about. Thoughts of *Simbra* came to mind and apparently to the gunner too: 'I don't like this boat as she is, Doc; she needs fifty tons more permanent ballast.'

We slipped alongside at last, and from the bows I had to watch the chance and jump for the dilapidated rope ladder hanging down *Harvester's* side, to swing in by the sally-port.

Two unborn whale babies only a few feet long were lying pathetically amid entrails that had burst from a whale on the flensing deck. Another of the unfortunate accompaniments of the industry. There is so far no way of telling whether a swimming whale is a pregnant female or not. In the earlier years of this whaling, the majority of the females caught seem by all reports to have been pregnant. But now, in a search for these babies or foetuses, I could find not more than one in four pregnant. Was this any indication that there had been no real recovery of the stock in the non-whaling war years? Old hands generally are pessimistic about it. There has been over the last few years an internationally agreed quota of 16,000 Blue Whale Units as the total permissible Antarctic catch, which is almost certainly far too much for an animal which produces only one offspring every two to three years. A Blue Whale Unit is the equivalent of one Blue whale, and considered equal to two Fin whales, two and a half Humpbacks or six of the small Sei whales. The result is that the number of whales of all species usually taken in a typical Antarctic season to make up this quota, amounts to the tremendous total of close to thirty thousand. Representing something like twenty thousand hours of torture for which men are

* In the last few Antarctic seasons the percentage of pregnancies has again for some obscure reason been rising.

highly paid and shareholders in some years will get very large dividends in case the torture may not be so great the next year. All to produce still more margarine, while the number of overfed fat humans in many countries appears to grow no less, and more and more heart muscles break down under the strain of our living excesses. Yet the most popular doctors are generally those who tell the overeaters that the trouble is their pituitaries and not their habits.

On a subsequent trip on *Southern Wilcox*, Johan Borgen was at what must surely have been a gunner's best. We got five whales; the first two killed at once; three, and five minutes for the third and fourth; the last one hauled to the surface apparently unconscious but still alive after ten minutes. If only whaling could have been like that all the time.

The men were now beginning to count the days to the end of the season. Seven days a week the slaughter was going on for the whole four months at sea. It was bad in every way. Machinery and men needed a rest, and the whales above all. Six days shalt thou labour is a sound law and it was becoming more and more obvious that whaling would benefit by its observance.

I checked up again in the next few days on the destruction of the meat by the bursting of the intestines, and ate samples of the livers, hearts and kidneys as well as the muscle. In the humanely killed whales the taste of these organs was hardly distinguishable from those of the finest ox. Knowing the flesh was whale, you ate the muscle prepared to find a trace of oil in it, and under the circumstances you could detect it. Otherwise only the larger size of the fibres in the steak distinguished it from beef. But in the intestine-mutilated whales there was tremendous contrast. The steaks were distinctly oily and had often got to the length of smelling as a well-dead fish does; while the liver and kidneys were not so good. It was obvious that the meat from only about one whale in ten could be marketed as an

alternative to beef until humane killing became routine instead of an occasional occurrence. As it was, five to ten tons of edible meat was lost from each whale by its processing to utilise just the five to nine per cent of oil in the fibres, and at the immediate post-war whale-meat prices it was an Antarctic loss of ten million pounds sterling annually.

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At the end of February we had a visit from another of our oil tankers, *Southern Collins*. She came alongside in sheltered pack, after, like *Opal*, having to wait for bad weather to abate.

March brought increasingly cold, blustery days and it was obvious that winter was approaching. More frequent fogs seemed always to be heralded twenty-four hours ahead in clear weather by any penguins around the ship; their departure soon followed by the wind going more northerly. By March too the little Wilson's petrels had nearly all left us, probably already on a northerly migration; but the Cap doos and the Killer whales were at their routine as usual. Antarctic petrels accompany their cousins these Cape pigeons most of the season. Rather similar in colour, but a more chestnut brown on the wings and mantle without the same mottling. They tend to keep more to themselves, leading a more independent existence in small flocks in the pack ice, congregating frequently on the tops of the larger bergs, and never so attracted by whaling operations. The winter mortality amongst the Cap doos is very heavy. They learn to depend so much more on the whaling operations than the other birds do, and when the season closes down they have lost the way of fending for themselves. There seemed to be an understanding between the doos and the Killer whales. They respected each other's territory, and while the birds avoided going near pieces of whale entrails on which the Killers fed, the Killers seemed to keep away from anything the petrels had claimed. Time and again the great dorsal

fin of a Killer would move right through a flock of feeding doos, but they paid no attention to it, and I never saw a Killer molest them.

With the increasing fogs and lower temperatures, *Harvester's* rigging now generally looked as though wrapped in cellophane, but thaws of only a few hours duration were frequent, when falling ice added to the hazards of the flensing deck. On board the factory in this summer period, I found that medium-weight underwear of cotton or lightweight wool with a sweater and service battledress was enough, although extra lightweight canvas windproof trousers and blouse would be needed on unusually cold days. But on the open bridges of the catchers, especially in later summer, when spray froze in the rigging, even a thick flying suit was often not enough to keep out the bitter cold hour after hour, especially when it came with a southerly wind off the Antarctic land mass. All our catcher bridges were open, with just canvas windbreaks. Only the Japanese as far as I know have used closed-in wheelhouses, but these so often just get frozen fast and drifted up with snow.

Mid-March now, and in the first signs of another dawn I swung down on to *Southern Shore*, another of our older catchers, once more to exchange the noise of the factory for the quieter waters and the peace of the pack ice. Whales were scarce and the nights getting long and darker. As the light failed the first evening we crept into the pack and drifted; two Crabeater seals and a Leopard on the neighbouring floes keeping us company; while a Cap doo, dazzled by the catcher's lights, had to be rescued from the engine-room. Then for a game with Leopard. Someone got a signal pistol and fired a red Very light in the air over on to his floe. He opened his mouth wide and followed its course until it landed close to him. The same with a second; then he rolled over on to his back. Great fun he felt that people should come to play with him like that.

Next morning, choppy seas outside the pack and a bitter

southern wind. As we passed the towering faces of a big table berg three little grey black dorsal fins appeared skimming through the wave crests at a great speed, then disappeared. Three blows a bit farther on and again those sleek backs that just cut through each wave with very little showing—Sei whales, the grey speed merchants that come down to the extreme south only towards the end of the whaling season. There was nothing else in sight, so we chased them for half an hour before one crossed right in front of our bows and the gunner fired. The harpoon went right through the little whale toward the tail, with the grenade exploding in the water. But he died more quickly than I expected and when alongside seemed so pathetically small, forty-five feet.

Seven miles further on, close to pack ice, another of our catchers was fast, with a harpoon in a big Blue whale, and in conversation with our gunner Thor Hansen, we were told they had been chasing for two and a half hours. We headed on west along the pack edge, coming upon a flagged whale carcass close to a small iceberg. In answer to our radio message to the owner of the flag, he replied that it must have been a whale he had lost nearly a week before. Giant petrels flopped away as we came alongside and the smell was overpowering; so after retrieving the flag, the carcass was left to the birds.

Another hour, and all we had seen was a little Minke whale that dashed away into the ice. So we turned north on a steady course through a sea of scattered drift ice. Crossing the course of another catcher heading back empty-handed to the factory for bunker oil, our Sei whale was handed over to him as a fender and we carried on.

Not long afterwards, away to the west, the single spreading spout of a Blue whale. He started to run straight as we approached, and as the catcher closed in he blew three times, with the shortest shallow dives between each, but with the last his great back arched and down he went deeply.

Our engines stopped and we lay rolling gently. Three minutes seemed a long time, four minutes, five; where had he gone? Six, then seven, and away a mile to port up went the spout again—Engines full ahead. Bluey took things easily again, waited until we were close once more, then repeated the same tactics, this time coming up far astern of us. Another twice, then the gunner acknowledged defeat:

‘More brains than we have, that lad. We’ll leave him to it.’ These words were indeed music, and the sun seemed to burst out with extra warmth over this world of ice in very gratitude. When bergs and floes are around it is difficult to feel you are in a vast open sea, hundreds of miles from land. More like weaving through an archipelago of islands. And often a single whale, chased by a catcher like this, is complete master of the situation, with a plan of action which a school of whales rarely if ever show. The use of Asdic has been tried on catchers, to follow the course of such a whale under water, and one or two of our vessels had it. Some gunners claimed it to be a help; others found it of little value. A more modern echo whale-finder, now on trial, is apparently more effective, and at first sight would appear to be loading the dice against the whales more than ever. Yet while it may help in the capture of a single whale, it may well scare and scatter all other whales over a wide range. But the continued persecution by any means, particularly of the Blue whale, has become too serious to be allowed to go on.

Half an hour after we left our solitary whale, we encountered two Blues heading south toward the main ice, but it was hours away for them and scattered drift bits of ice could give them no sanctuary. If only they would learn to dodge round and round icebergs, they would escape so often. This time they altered course repeatedly before starting on a frantic straight run to try to shake us off. For twenty minutes they kept us all out before we gained at all. It was a hateful business, and at last they suddenly dived and altered



Once more in open sea, we are intercepted by one of the Antarctic Patrol people.



Joined by his Lady—our Killer whale friends again. The male shows by his larger dorsal fin.



Part of the toll the industry takes of life. Balen whale on deck with a ten-foot long baby found inside her.



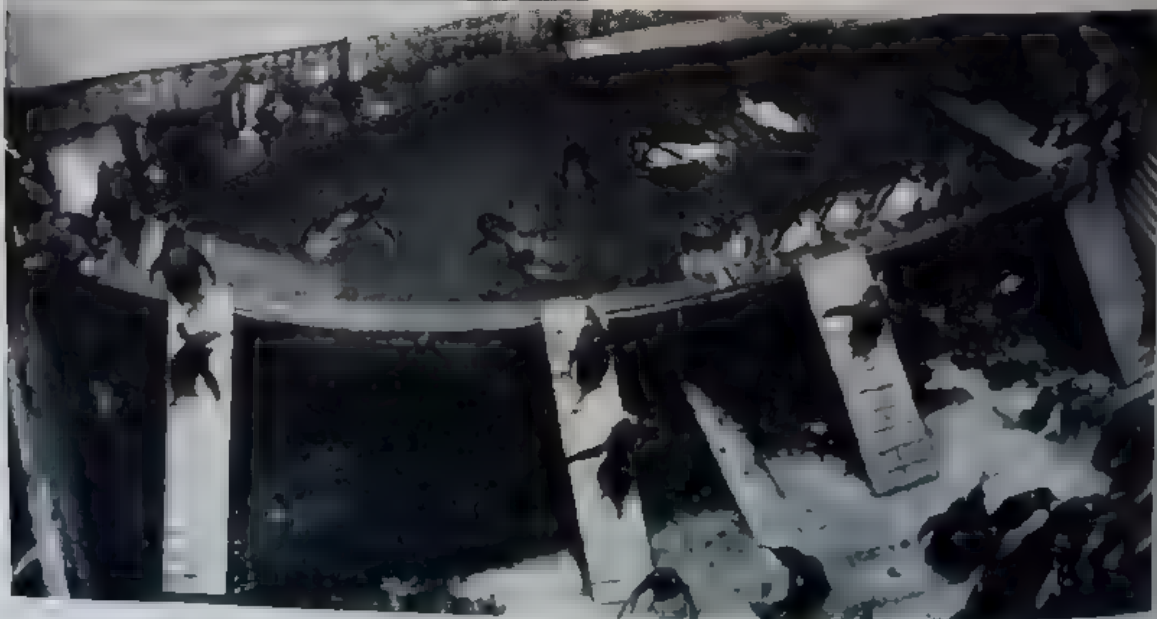
An embryo baby of only three months pregnancy. An almost perfect replica of the adult.



Once more the waters of Leith Harbour. Looking West to the whaling station at the foot of the glacier in the distance.



The Penguins now installed where the Piglets had been.



They played up and down the hen ladders all the way North.

course. We slowed down, and a minute later, slightly astern and to starboard they appeared on the surface, moving very slowly, one of them obviously played out. We turned toward them at less than half-speed, and without trouble the gunner got the harpoon into the larger, apparently the female, close behind the head. She quivered and sank straight down. One of the few lucky shots, but only after a chase of over an hour and a quarter, during which their fear was obvious.

Whales can undoubtedly communicate with each other for long distances under water. A pair becoming repeatedly separated by a mile or two when being hunted will come together again very quickly. In this last kill, the remaining whale, after the loss of his mate, swam slowly round us as we waited for the last of the vibrations of the rope to indicate that all movement of the harpooned whale had ceased. Then slowly the winch hauled in to avoid undue strain with the great bulk coming up from the depths. Yes, it was the female, and with the carcass inflated and towing alongside we headed in the direction of the factory.

Visibility was again becoming poor, but as we made almost eleven knots, two Killer whales spotted us from about a mile off and closed in to see what we had. The tongue of a fresh Blue whale was just what they liked, and they paralleled us, leaping almost clear of the water to get a good look, then closing right in to our wash; a big male and smaller female. The camera took their portraits as well as the light would allow. Then very neatly these two stars nipped down and into the trailing mouth of our whale. Although I could not see them below for the turbulence of the water, they apparently got what they wanted, and after three or four repetitions, sheared off and left us.

Then ahead once more appeared the catcher we had met in the morning, when she was fast in a whale. She was still in the same area with a whale now alongside. It was the same whale, and as we slowed down on coming up, her gunner told us the story. It had taken five hours and nine harpoons. A big

female Blue, and, as it turned out later, far advanced in pregnancy. These mothers fight desperately for their lives and those of their unborn babies. Five hours—nine harpoons. —!

Our telegraph rang 'Full ahead' again, and the gunner was silent for the next ten minutes as I stood beside him on the bridge: 'Mr. Hansen, we have got to do something about the way things are with this awful harpoon.'

'Jo, I think so.'

As we passed close to a small isolated ice-field, a single whale spout rose from behind a rugged floe. We turned towards it. Another spout in exactly the same place, then another. As we glided up at dead slow speed it turned out to be a Blue whale about fifty feet in length, too small to have been away from his mother for very long. Perhaps she had been killed. Now he was just having a short doze to himself, lonely, and tired in a quest for others of his species. We moved away quietly, leaving him in peace.

A lookout was kept for more whales until dusk, until the factory showed up as a tiny cluster of lights in open water to the north. The sea was rising with a freshening wind, as we left the remaining strips of pack ice behind; and an hour and a half later, as our bows were pushed up toward *Harvester's* sally-port, I could see that getting on to the factory was not going to be easy. With a six foot rise and fall on the lee side, it was a case of standing on *Shore's* bulwarks behind the gun, and hanging on to the rigging. Then as we rose on the crest of a swell, it had to be a quick gripping of the rope ladder hanging from the top deck of the factory. The thought of that icy water below gives me the cold shivers yet. The sally port in use on these factories should always have scramble nets down to below water-level. In bad weather, personnel are sometimes transferred in a large basket as a bosun's chair, but the risk of men falling into the water between is always there night and day. Safety precautions in whaling, whether they be attention to

... itself, or anything else, appear so often very secondary to the rest of the work. The scramble for oil inevitably always come before such things as scramble

As I turned into my bunk for an hour or two while waiting for an injured man to be brought in on another catcher, the thought of those five hours and nine harpoons and what it had meant to that mother Blue whale, put all sleep out of the question. I got up and pulled out a sheet of foolscap, and as the winches at the skidway rattled out an accompaniment, made a start on the list of possible methods by which any animal could be killed humanely, and that might be applied to the whales. One thing was certain: nothing we could do would be worse than the present method. A full investigation of the problem would have to bring in biologists, physiologists, chemists, and engineers, involving companies whose outlook would have to be beyond the rut of quick monetary returns, who would co-operate in what might prove to be long-drawn-out, disheartening research, to find the way of taking the whales that would atone for what was being done now in the industry. Little did I think as I sat in that cabin beside the hospital on *Harvester*, that in the few months after our return to Britain I would be fortunate in finding within the whaling industry itself the necessary courage and drive to co-operate with our engineering firms on such a quest. And it was to involve personalities who would freely spend money in the preliminary testing of ideas against petty opposition and often ridicule. Then incorporating their own ideas, keep driving to the final evolution of the humane electrical harpoon in the next six years.

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Next day a fresh breeze and considerable swell showed the splendid capabilities of the gunners in handling their catchers as they came up to the stern of *Harvester* with

was a close acquaintance with the Third Officer that ever since my arrival at the factory two months before, I had been with the catchers enough now to appreciate the skill of these whaler skippers, not so much for the actual gunning as for their seamanship. The way they brought the bows of the gunning vessels at times right up to within three feet of our stern gates, and kept them there, was a thrill to watch, and meant just split second co-operation from their engine-rooms. The catcher first or second mates would then be standing on the gun platform with a pole-hook to catch the heaving line from the factory. It needed only one slip on the icy deck to send them overboard, but I never saw it happen. Although in this too I asked them to wear their life-jackets, they would just laugh.



Nightmare to the Whale.

Chapter Twelve

Back to South Georgia



Giant petrels and the tiny moth-like Wilson's petrels at the flagged carcass of a whale.

Every bit of truth that comes into a man's heart burns in him and forces its way out, either in his actions or in his words. Truth is like a lighted lamp in that it cannot be hidden away in the darkness because it carries its own light.

EDWARD WILSON OF THE ANTARCTIC

Back to South Georgia

THE end of March found us one hundred and fifty miles south west of the South Orkney Islands. Our lowest night temperature still 9° Fahrenheit, but with a southerly wind it was low enough; and at this northern extremity of the Weddell Sea any calm weather at all now allowed young pancake ice to form on the water, and the season was obviously getting to an end, with the weather generally deteriorating. Midnight on 7 April was our agreed closing date, and the crews were glad to be coming to the finish. Just as the quarantine cabin was being prepared for homeward-bound passengers, one of the deck-boys celebrated by developing the worst dose of chicken-pox I had known for a long time. The Antarctic has an endless store of surprises, although we had even scarlet fever on the outward voyage.

A moderate gale, from the west this time, came on us before the last day of operations, so we shut down and headed for Leith Harbour, picking up a final two Fin whales from *Wilcox* on the way, our course passing to the east of the South Orkneys.

As soon as the last whale had been disposed of, there was an energetic tearing up of the protective planking of the plan deck. Scored, battered and saturated with oil and debris, the planks went over the side. We wallowed in seas that at times looked troublesome, but the plan deck operations went on, and the thought was of how our catchers were faring, each now on its own course for Leith Harbour. Beyond the South Orkneys the gale gave out, and the last part of the journey along the north-east coast of South Georgia was in sunny warm weather. The lower

slopes of the mountains were still bare of snow, with their dark green summer growth. But another winter mantle of white was not far away.

Southern Venturer was just ahead as we crept back into Letch Harbour, but instead of us coming at last to tie up in calm, clear waters as I had hoped, the old trouble was there, a scum of bilge and black oil trails everywhere. And just at the entrance to the inner harbour, again a catcher steamed in circles pumping out; the same story of four months previously. Soon after, the first of the bird casualties came in. Oil and bonus, nothing else mattered.

The full realisation of the extent of the fanatical greed in whaling then came with a report that another factory had actually pumped a big batch of unused fuel oil overboard at sea, to make room for extra whale oil that she would not otherwise have had space for. This report was later confirmed in London, and the quantity involved apparently close on two thousand tons. It was hard to believe that any manager in the industry could commit an act of this sort. That the human species would one day pay dearly in retribution for all such behaviour was a certainty.

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The hill slopes of South Georgia have only a short period of real greenery of tussac grass and mosses, when the birds and animals have their breeding season. By the end of March the penguins are departing from their scattered nesting communities, and the Elephant seals too leaving for the winter at sea. Colonel Niall Rankin had come down from his home in Scotland on board *Venturer* to spend the months of the whaling season on a study of the albatross and other bird life of the island. His motor boat *Albatross* and two Shetland lads to help man her, were transported in the same way. His craft had at one time been a unit of the Royal National Lifeboat Institution at the Fraserburgh station, and, now fitted with twin Kelvin engines, she was a fine compact

sturdy craft for this South Georgia coast work. The Colonel, also commissioned to collect penguins for the zoos at home, had set out with a whale-catcher fitted with a pen on her foredeck. On a series of press-gang raids on various penguin townships, selected protesting inhabitants were carried off. Great care had to be taken to avoid injury to the birds, crowded as they were on the catcher in none too calm weather. But they were ready for us to take on board, a hundred and fifty in a pen on shore, mostly Kings, but also Chinstraps, Gentoos, and some of our Rocky friends.

On *Harvester* a large enclosure was fenced off at the top of the stern whale ramp where the piglets had been, and an old spacious flat-bottomed rowing boat converted into a swimming pool with a lining of green tarpaulin and running salt water. Hen ladders allowed intending bathers to walk up to jumping-in level; and up and down these ladders the traffic was to be almost constant the whole voyage home. But the Colonel had had a trying time over the feeding problem. Large supplies of fish were needed, and arrangements for this were not satisfactory. We had wirelessly ahead from the whaling grounds to South Georgia for a catcher to be out with men at the fishing lines, but at the end of the season it was apparently the old story. Penguins and fish were not whales, and nothing had been done. Sometimes you even wondered if some of those responsible had any real interest in their own wives and families, considering the law did not allow them to be made into oil. In the end we got one of our own expedition gunners to take his catcher out in an effort to make up for lost time. He was rather more interested in his bunk than in helping to catch anything smaller than whales; but we secured some boxes of a species of *Notothenia*, not unlike small rock cod, and a few of the long-jawed *Cryodraco*, known as Crocodile fish, and covered with a transparent, sticky, mucoid slime: both species excellent eating. This last-minute fishing expedition did not yield anything like enough for our extra

passengers, and whale meat had to be used to help out. The larger Kings thrived well enough on it, provided it was cut up in small, thin strips. But the Chinstraps, Gentoos, and Rockies could not digest it well and so had priority with what fish there was. It is difficult to get people to realise that many penguin species eat mainly krill, and little squids. Fish is not a constant part of their diet, and so often zoos try to feed their penguins by pushing such as whole haddocks down their throats; a great strain on their digestions.

Harvester was now being got ready for the voyage back to Britain. Most of our catchers were tied up in a long row to see the winter through at Leith Harbour. One or two due back to England for major overhaul would have to do the journey again in stages, taking on fuel oil. Some of our crew had transferred ashore to overwinter on repair and general work, when they would rejoin the factories next season. But our sister *Southern Venturer* had more whaling yet. Due to sail a few days ahead of us, she would travel through the Straits of Magellan with some of the older catchers to spend a further six weeks hunting Sperm whales off Peru in the Humboldt Current; that cold-water stream rich in plankton and fish life, flowing north from the Antarctic up the west coast of South America. It is the haunt of the small female Sperms with their young as well as big males, and where these creatures have been seen to gather round a stricken harpooned comrade regardless of their own safety.

One or two of *Venturer's* men came along to my cabin before she went, where we were discussing the results of the season just completed. These conferences usually started with whaling, but drifted on to any subject, with anyone dropping in to take part. Engineers started off by refusing to sit down because of greasy dungarees, ending up in the course of an argument, on the white coverlet of my bunk.

This time Jack Flynn, one of the electricians, was in the armchair, and Walter Manson had come in to tell me about his afternoon 'stroll' up Mount Caronda, and was stirring

a cup of cocoa beside him : 'Well, Doc, there won't be many more years of Caronda or South Georgia if this whale-killing goes on the way it is. As many wasted this year as ever, left out to rot with flags stuck in them. It's wicked, but each factory is worse than the next. Those folk that attend whaling conferences should come right down here and see for themselves, but they just take anybody's word for what goes on, and the inspectors don't seem to bother either.'

'You couldn't say that about our inspector, Walter.'

'No, that's maybe right enough, but we have wasted a lot of whales. And what about this factory outfit that has just pumped his fuel tanks overboard? Fifteen hundred tons of it; the manager of that lot should have been thrown into the sea with the oil. What was the inspector there doing to allow it?'

John Duncan, the second engineer, walked in.—'Good gracious, Doc, you don't mean to tell me you even allow electricians in here.'

'Johnny, I don't know where I would have been with all my electrical gear in the hospital if it hadn't been for these lads. Sit down and tell us what you really came for.'

'Well, it's like this. Our shower has packed up again. Do you think those baby whales could be lifted out of that bath to let the man that works hardest on this ship get into it?'

Walter pretended to clutch at a chair for support; and John had the usual twinkle in the brown eyes of him as the thick Nestlé's, looking like whale milk, went into his cocoa.

'And I suppose this man Manson is having a moan about something. Now I'll tell you. He's going home to this Shetland hide-out of his with a damn sight more bonus than any of us will get with all our overtime.'

Walter was a favourite with the engineers, for he was always willing to help them on any extra job about the plan deck, even in his off time.

'I know we'll get a fair bonus this time, Duncan, and as

I've said before, this company in the past has been good to Shetland. But I've got to look to what is to happen ten years from now; and will there be any whaling for us then? Can a fall in whale oil prices sometime in the future justify the overfishing going on now, that any man who has been at this game for long can see? We haven't the fishing as it used to be to fall back on in Shetland any more. I have to think what our kids are going to be faced with sooner or later.'

I liked Walter too for the way he had always taken an interest in the running of the industry, not just accepting his bonus at the end without question. And you couldn't help agreeing with what he said. The Scottish sea fisheries were going through a bad spell; the recovery, resulting from the war years' stoppage of the pressure on the fish, apparently being rapidly undone, and there was certainly a temperature change too that was making the fish move their grounds farther north. But I was disgusted with the whaling industry even more for its callous cruelty than for its short-sightedness.

'And wait, Doc, till you see what happens in whaling now the Blues are getting more scarce; they'll bawl to be allowed to kill Humpbacks again, but kick like hell at the suggestion of your ten years protection of the Blues. I tell you they're oil mad.'

Tom, the Third officer, had opened the door and was standing with Cyril MacDonald, one of the wireless operators, at his back. Cyril was a lad who seemed to enjoy appearing as a bit of a Communist when the opportunity offered. Twice torpedoed on tankers and never married; he said the Honolulu maid with whom he had fallen in love thought more about the latest Yankee washing machines than she did about him, and it took the romance out of Waikiki in the end. Upon which information John Duncan would start trouble by his admiration of her good sense. But Cyril was a Highland dancing enthusiast, and that

finished the so-called Communist front. Being sinister and letting yourself go in a reel were not compatible.—Tom sat on the arm of the big chair almost on top of poor Flynn as he joined in.

‘Well, are we going to sit and wait for some kind of help from a government that doesn’t know what a primary industry is? Agriculture, fisheries, and whaling are all beyond them, and we’ll be caught out again in another war with still fifty million folk to feed. You’re not a Socialist, Doc?’

They had been well treated to the bees I had in my bonnet at various times already, particularly on agriculture with forestry and the like, and certainly whaling seemed to be beyond any government to really get a grip of. That was why the decent companies had such a responsibility to do the right thing. But when we talk of Socialism, do we mean real Socialism? The whales were true Socialists, or the only true Communists if you like, yet they remained free people in spite of all man could do to them.

The Second turned round from an inspection of the bonny lassies that kept my cabin walls eternally cheerful and a source of well-being to any on the ship afflicted with temporary depression: ‘Quite so, Doc. I’ll be along to visit these ladies again later, but I’ll get my towel if you’ll get the bairns out of the bath—O.K.’

‘Fine, Johnny; and you can take the dirty cups in with you.’

But it became a useful discussion. Other civilisations in the past had done the same as we were doing and are under the sands of the deserts now. They apparently got to the similar state when they crowded in cities on secondary industries where ultimately everyone ordered everyone else around and nobody did anything really productive at all. Each parasitical on his neighbour until they all died out. Where the human species is heading generally, is far more important than any temporary fanaticism about creeds; a

species that rabbits cannot begin to compete with in rate of breeding over a period of years. The bunnies die out periodically, while humans go on and on. The political problems following power in the hands of the inexperienced or the selfish, follow so quickly on the overcrowding in cities and the mentality that results from its confining influence. But we are no different from the rabbit folk when it comes to destruction of our food supplies.

Cyril had been thoughtful as we went on: 'But Communism would control these things, when everyone acts for the good of the community, and birth-control can be ordered wherever it is needed in a food shortage.'

Tom looked pityingly at him: 'Birth-control by separation of the sexes in labour camps you mean, Junior. Though they might be doing something even as good as planting trees that we hear about, it still doesn't excuse the way it is done. Real Communism doesn't exist amongst humans. Did it ever work out amongst them anywhere? No; you have to have a dictatorship by a bunch of bullies with inferiority complexes to get anything done. But, brother, I'll grant you, your Communism will be no worse than what we'll have sooner or later if our Jerry friends go ahead in the same old way and allow themselves to be run by another bunch of louts.'

'Well, people have to be ruled by force until a new generation has been brought up to the new State. Workers behave like animals given the chance, when they hold marches and smash things, because they don't know what is best for them in the long run. That's why force is needed; call it fear if you like. To begin with, at least it's necessary.'

I didn't like Cyril bringing the other poor animals into such a comparison with men, and Tom stared at him before he spoke:

'Listen, my son. If a man ever objects to what is being done to him he can go on strike only once in your Communist El Dorado, we know that. He disappears before he

can do it a second time. You saw the conditions in Murmansk when you got the chance to go ashore from the *Empress of Australia*. It didn't look so rosy then, did it? Remember the funds for the Russians, and the poor devils fighting for the Kremlinites, not for Russia at all? And the swords of Stalingrad, and the London girls with their hammers and sickles on their scarves? Your Kremlin boys laughing all the time; laughing as the lads like your bunk-mate Jack Peters, drowned or froze to death off the North Cape trying to get tanks to them, the people who had ordered the invasion of Finland. Now you are far enough away from it, but from some damn' perverseness in your stupid make-up, it appears rosy to you once more. Cyril, boy, it's just a rebound from the feelings you have had about the treatment your father got from his boss. But you can't condemn all employers because of one or two, any more than we could condemn the average decent Russian bloke for his misfortune at having the rulers he has.'

Duncan reappeared with an armful of underclothes: 'Nationalise the lot, that's what I say. Then you can lie in a nice warm bath all day long. Nobody to sack you, fire you, give you your books, or dismiss you.'

'What about the wife, Johnny?' came a voice from the armchair behind Tom's back.

'Oh, hell! I forgot about her now.'

Walter got up to go ashore to see some of the lads who were staying behind to overwinter: 'Well, I've thought about going out to some place like Australia. They say folks from home are needed there to start proper farming if the country is to be saved, and not just leased for the Japs to develop. But their labour troubles are apparently even worse than ours, I don't know. Perhaps Canada might be better; or East Africa, for I hear they are to start sea fisheries from there in a big way. But the wife thinks this planning idea of the Government will be too good to miss, when folks can sit back and not worry any more; but I'm

not having the kids growing up to expect charity from a government or anyone else. Two brothers I have in Tasmania too, and I don't think they'll come back. I'll maybe get their lasses to write to the wife and get her to try it, anyway.'

'You'll miss the peats, Walter, and you'll never know what the weather is going to do without seeing Sandness Hill.' But I knew if he went, Walter would be just a great asset to any country.

'Oh, I'll miss Shetland, but the world is what you make it anywhere. I don't mind so long as the kids are not brought up in a city. We can aye come back later if it doesn't work after a three years trial.'

Johnny ran his fingers through a mop of hair that looked as though it could do with a bath: 'There's Captain Thomas Lindsay there, our gallant Third officer. Time he emigrated and did a spot of real work.'

'Your bath is getting cold, Mr. Duncan. The engineers on this ocean-going barge are not quite skilled enough to provide steam for a bath as well as the ship's whistle, so in case we have to move, I suggest you get a move on before you have to break the ice.'—I led Johnny to the bath before the peace of the cabin was completely upset.

Tom was examining the little cactus I had brought from Tenerife: 'You are concerned about the cruelty to the whales, Doc. Well, I can tell you there is a big hell of cruelty waiting to be ripped open in the same Australia that Walter was talking about. I've been for my spell in the Outback stations, and the torture inflicted on scores of thousands of their cattle and sheep is a terrible thing, and it is done by the same sort of mentality we have in whaling, lust for more and more wealth from meat and wool that is the curse of that fine land. But we may be all driven overseas before long; then all that rot will have to end. Aye, and instead of doing something about it at home we have all this cotton-wool cradle-to-the-grave cissie business. A

fifth-column, softening-up process for something, and I don't like it. The nation losing its guts. God, I just hope old Scotia gets out of it and refuses to rot. Look, we have four and a half million Scots living at home, but fifteen million overseas. In other words, who's feeding the country? And there's friend Sparkie there calling himself a MacDonald and playing at being a Communist too.'

Tom had fits varying from mild home rule to active invasion of England. And when it would be pointed out by his Sassenach friends that his confounded country had never stopped invading, he would say: 'Well, time there was a lot more of it.' He had a delightful English girl for a wife who knew how to handle him.

Walter turned as he went out: 'Sparkie isn't a Communist or a Kremlinist or anything else like that, Tom; he just puts it on to argue with the likes of yourself.'

Cyril leaned on his elbow on the couch: 'My father is a shepherd living in the farmhouse of Skiachmore in Perthshire. It used to be a great farm, but not now. The laird will have no more ploughing, and Father isn't even allowed to turn over enough for his own tatties. The sheep fences are down, and the Boldrum woods that the Newfoundlanders started to cut are gone now and the ground to be left unplanted, for the rabbits. Grouse and stags are all the boss thinks about while he makes money in business in the south. The keepers are as bad as himself; shoot the hawks and trap the wildcats and stoats to make sure the rabbits aren't interfered with and can breed and eat everything; and all to let a few of his business friends and their women get a few hours amusement mutilating grouse. Our forestry and farming could employ thousands more people.'

I knew the estate of which Cyril spoke. It certainly was a sad exhibition. The factor, like the keepers, was no biologist. Even badgers had been poisoned instead of being strictly protected. And that was the place where at a bend in the river the laird had once seen a salmon on a rock

with a bite out of it. The valuable otters had been concentrated on the strength of that, and destroyed. Not long ago, the water was so full of eels the salmon spawn had little chance of survival. While down at the Tay Estuary near Dundee, salmon fishery people apparently with the same intolerance or ignorance had been trying to kill the equally valuable seals that kept down the same eels and almost certainly more than earned the few salmon they took. Against all sort of mentality, chemical pollution of water, and more and more hydro-electric disturbances the salmon was gallantly fighting to adapt himself for continued existence. It was all so typical of the way man treated his surroundings. And in our farming there was deterioration, the result of the decline of true fertilising and the excessive worship of the machine. Fewer and fewer men were left willing or able to care for plough horses, the gift to us from fifty million years of evolution. Our life blood now was becoming at the mercy of the mechanical tractor, a man-invented contraption of only fifty years, dependent on oil fuel from far countries. We were surely fitting the noose around our necks.

There were sounds as though a large seal, previously quiet, was now enjoying himself in the bathroom, probably like so many humans, and seals too, having at last got tired of a critical inspection of his ventral contours as he soaked his anatomy. Steam crept out round the door.

Tom emptied his pipe into one of the cups: 'Never mind, Cyril. You'll be a big capitalist yourself after this trip. If you were in the Russian factory, you wouldn't be likely to have the finance you have now; more likely to go home with your tram fare. And if you said it wasn't right, you'd have a nice, long time to cool off in the Arctic instead of the Antarctic.'

Johnny had gathered his things together, and came out of the bathroom a much cleaner boy altogether: 'Well, they had better watch themselves at home; if folks get Scotland

and our Tom upset, they'll find their precious White Halls redecorated in tartan. Then they'll wish they had kept quiet about their daft government control of all the things of no consequence and got on with the real things that we could tell them about, such as beer for whaling engineers—eh, boys?’

Duncan was a good lad to have around, but poor old Scotland was invariably the quarry used to divert a scrum.

There was a knock on the door: ‘Mr. Rankin would like to see you in hospital, Doc.’

Inside the operating theatre door opening on to the deck lay one of our homeward-bound passengers, a King penguin. Niall sat talking to her. She was apparently being hoisted in a sack up to the deck with the others, when they banged against the side of the ship. Now one leg was stretched out and she was unable to stand. I could feel no injury, and the patient lay very quietly while X-rays were taken. No bony damage was revealed, and she was left in a corner of the penguin enclosure, where there was no danger of her being trampled by the others; but she unfortunately became one of our losses on the way home.

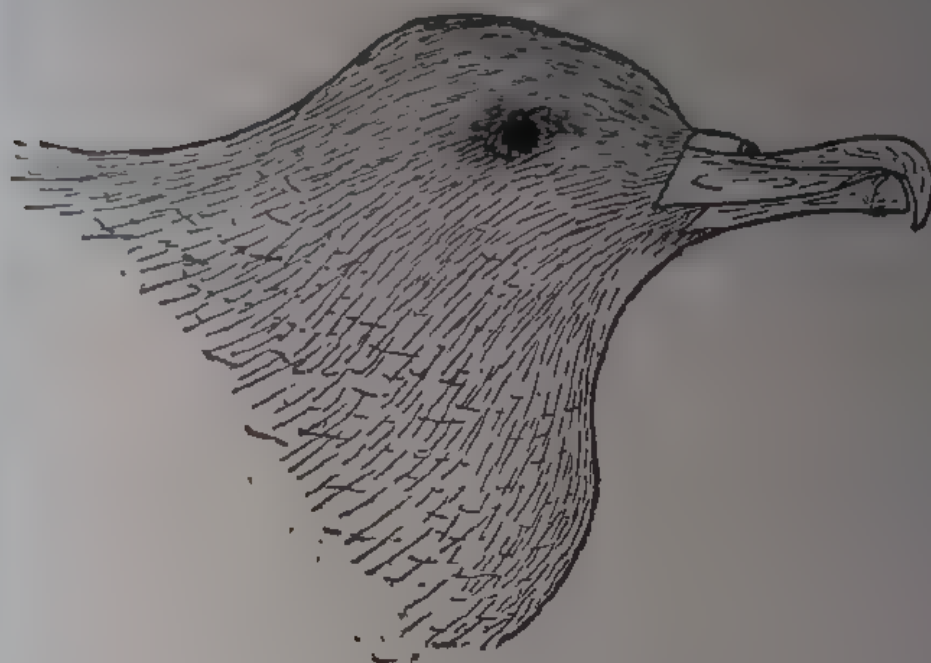
The boys had brought their session to a close and had gone when I got back with the Colonel to discuss our penguin food problems. Later, when he too had gone, I pondered on our previous discussions and how easily we could be dogmatic without knowing all the facts. Had Canada, Australia, New Zealand, Africa, been opened up by bowing to the rights of the existing peoples in these countries? Had the emphasis in the past not so often been on exploitation rather than development? Could we now blame other powers for not understanding us when we were in practice apparently working toward what we hoped would be self-government in the lands we administered, and yet still sang with gusto the words of *Land of Hope and Glory*? Was anyone in a position to criticise anyone else? Would the day ever come when governments honestly carried out what they

believed to be the morally right thing, regardless of their future at the next election? And there was Tom's reference to the Germans again. Yet these same Germans, cruel as they had been to their fellow men, could be so kind to other animals. It all seemed to be the product of an archfiend, laughing as he held our little planet in the hollow of his hand.

But Nature was surely getting tired of our periodic human orgies. Our civilisations breeding a higher and higher percentage of the psychologically upset, from whose ranks surely some of those in influential positions were being recruited. Surely biology alone gives the diagnosis. Pressure of numbers has made man increasingly quarrelsome. In his fight against Nature, as a result of a temporary monkey cleverness, the world is overstocked with him. Mass production, but the overall quality apparently deteriorating. Until in such a materialistic species suffering from empty bellies of its own inflicting, the final struggle for survival will not be pleasant to witness. Could voluntary birth-control come in time?—I decided to follow Johnny's example and have a bath myself.

Chapter Thirteen

The Council Rock



Brownie.

*She was Queen of Sabaea —
And he was Asia's Lord —
But they both of 'em talked to butterflies
When they took their walks abroad!*

RUDYARD KIPLING: *Just So Stories*

The Council Rock

THE chance now came for a visit to the Argentine whaling station at Grytviken. Mr. Fleuret the magistrate was going back to his home there from Leith Harbour, so I joined him on our catcher *Southern Truce*. Fifteen miles down the coast to Cumberland Bay until we turned in past the beautiful Nordenskjöld Glacier and round King Edward Point, where on the hillside stands a simple little cairn and cross facing Mount Paget, memorial to Ernest Shackleton. It had been located by his geologist, Vibert Douglas.

In through the narrows at King Edward Cove with the grouped Government residential buildings, the magistrate's house, wireless station and custom house. *Truce* let us off at the Customs wharf before going across to the whaling station at the head of this sheltered Grytviken Bay. Mrs. Fleuret was down to meet us and had a lunch ready which I shall not forget. Beautiful fresh lettuce and tomatoes from her own greenhouse, the first I had tasted since leaving Britain. And from my chair at table I could see across the bay to where, quietly grazing on real green grass, was a contented-looking Hereford bull with two equally happy-looking cows.

Later I walked round the bay through the whaling station, jumped a wall, or rather a good Antarctic dry-stane dyke, and landed in the middle of as healthy-looking a bunch of young pigs as I had ever met. They scattered like rabbits, then just as suddenly changed their minds, and came trotting back. Tough little Grytvikens eating the best of Antarctic vitamins, the winter blizzards had no fears for them. It was quite true what Walter had said, this whaling station was an example of what a whaling station should be. Instead of the

anaphernalia of whaling scattered everywhere, the whole place was comparatively neat and tidy. Houses whitewashed and pathways and roads between sheds were clean. Ropes, ironwork, and equipment generally, stacked where any item could be found at once. Obviously a pride taken in the place. Was it perhaps because the manager, foremen, wireless operator and others had their wives with them? Probably that had a lot to do with it. But when I have suggested the same thing at other stations, the idea has been looked on as something quite impossible. Yet women stand the South Georgia climate perfectly well; they contend with far worse in Labrador and Alaska mining camps, and would easily stand life on a factory ship too. Are men afraid of yet another of their so-called strongholds falling? The excuse put up by one company that women would upset the men at work is I am sure just another bit of whaling nonsense. The psychological effect of the homely presence of well-chosen women in isolated communities is of great value.

On along the shore line of the bay; it was a calm, sunny day and all at peace. Dominican gulls as usual paddled in the shallows, beside the stranded hulk of an old wooden vessel. Close to the Hereford bull and his lady friends, a pathway ran up to a small rather neglected cemetery where small headstones stood at the graves of whalers of more than one nationality who had died far from home. And at the far end beside a wooden rail fence, a simple upright, undressed, grey granite block marked that of Ernest Henry Shackleton, with the date of his death while on the Quest expedition as 5 January 1922. He had died at South Georgia, and his body on its way home to Britain when at the request of Lady Shackleton it was taken back to the place which had meant so much to him. They were brave women these, the wives of such as Scott, Shackleton, and Wilson, who had to be content to take what must to them have seemed a very second place to the Siren of the Antarctic.

I sat down at a corner of the grave, and as a faint murmur

of Cap doos came from the direction of the whaling station, the grey granite dimmed, and I seemed to see only grey heaving waters, and a ship's lifeboat partly covered in with rough boarding, with a tired, weary man taking his turn at the tiller. As he turned his head, the eyes were steady and calm and full of hope. A smile crept over his rather heavy features. A wave crest slapped against the bows; a column of spray shot up as the whole boat began to submerge; down until only the rudder remained. And somehow it was the dorsal fin of a great whale that sank into the hillside above the grey granite block. As I looked up in the direction of Mount Paget, I knew that if he could do what he did, I could hardly look on that grey granite again if I failed the whales in their trouble. No, I had not been sent to the Antarctic in comfort just to put bandages on a few men and sail home again.

Very reluctantly I said goodbye to Mr. and Mrs. Fleuret, Falkland Islanders who had made their home here a real Antarctic oasis for those few hours. *Truce* took me back to Leith Harbour in the failing light.

That evening a Cape hen, coming over against the glare of our factory flood-lights, collided with the rigging and was brought to me for a check up. They are delightful old things these Cape hens, or Shoemakers as they are sometimes called, like rather heavy, dark-eyed, sooty shearwaters. On the whaling grounds they come round periodically, but never get mixed up with the other noisier Petrels. This one made no protest as I examined her. No broken bones and no damage other than apparent slight concussion. But she wasn't fit to be on her own for a bit, so was given a box on the boat deck and christened Brownie. Our preparations for departure were getting on toward completion, so next day I would go over toward the point at Cape Saunders at the entrance to the harbour for a farewell to any of the penguin people that might still be around. And it would be best to take Brownie with me to get her away from the oil of the station.

It was midday before we got away; a scramble over snow and scree slopes above the light beacon on the point at the entrance to this whalers' bay. But as I slithered on the loose surfaces and frequently sat down, Brownie lay quietly in my arm and would look up with a funny little side tilt of her head as I talked to her. Once round the point, the slums of men were gone. To the east, the sea that went on and on round the Antarctic continent until you came in behind back to South Georgia again. And along the coast to the north-west, the rugged headlands that looked out up the long trail of the Atlantic. On and on past the northern sea territories of the Wandering albatross, to where the shark people lived in the warm water, and the flying-fish planed over the waves. Until it ultimately got colder again and you came to more ice where the Harp seals lived; and then the North Pole itself. But the rugged headlands were content to stay where they were, guarding the bay where laughter and love, violent quarrels and make-up kisses, sometimes tears, but never hate, made up the life of Penguin City. This was April, and most of the citizens would be gone for another year, taking the youngsters into the big world. Brownie just quietly contemplated it all, and I did wonder what she could be thinking.

A rather bedraggled Gentoo penguin stood on a rock at the water's edge. He looked up as we came along. The very same penguin from whom I had tried to clean engine oil by smearing him with butter two days previously. I had found him first sitting on the shingle high above the water at Leith Harbour, lonely, and giving a pathetic little call now and again for his pals that had gone. I had left him where he could get away without being messed up again; and here he was, taking it in stages to get as far away as possible from the source of all his trouble.

We sat down beside him, Brownie quite content on the tussac grass. But the party was not complete. Out from the shore I could see a few penguins apparently just lazing

around. Suddenly the water seemed to erupt below us and three Rockies shot out to land beside Gentoo, shook themselves and proceeded to come right up to say: 'Hello, folks—nice day,' very solemnly as they left wet patches on the dry rock where they put their feet. Was I dreaming again? Brownie half-rose in sudden interest and sank down again, while Gentoo took it all as a matter of course and kept his back to us while he persevered with the cleaning of his poor little buttery feathers.

'Well, hello to you too, people. We're very glad to see you along like this, for we thought maybe you would all have gone off by now. Are the children all grown up fine?'

Rocky Two in the middle had most to say and number Three on his left was rash enough to contradict him at one point, whereupon there was a tremendous dressing-down and a good bashing from Two's flippers. The party then lapsed into reverie as they stood, and a little sleepiness seemed to creep over everyone except Gentoo, who went on with his toilet. No, there could be no glimmer of hate at any time in the make-up of those little folk, not even hate for Leopard seal who waited for them amongst the tangle. They accepted him as just part of the scheme of things. Misery was something only man could inflict.

Gentoo shook himself, and at last turned and came slowly step by step toward us, when Rocky One woke up and in an equally deliberate way went to meet him. And there he stood beside his unfortunate friend to help him with the bad, sticky bits on the back of his neck. Rocky Two then came up and nibbled at the button on my jacket! 'It was me you spoke to before you went with the whalers. What did you think of it?'

This surely was where I had to start pinching myself:

'Oh, Rocky, it was horrible, a dreadful, brutal business. I saw them take hours and hours to kill one of your Blue whale friends. It's as bad as the way they torture the furry animals for days in traps.'

'Do men do that?'

'They do, and just to get skins to hang on the bodies of their women for decoration. Thousands of years ago men were kinder; they only took skins then to keep out the cold.'

'Don't women use them to keep warm?'

'No; only in far-away cold places are skins of deer needed for that. And in our civilisation men don't use furs, yet they haven't as much fat as women to keep out the cold.'

'But don't women know that it is cruel?'

'Yes, Rocky; some of them do; and the others don't ask, but their vanity is greater than their kindness.'

He walked away a few steps to absent-mindedly watch Centoo at his cleaning, and then came back.

'Can't the kings and queens and emperors and other rulers we hear about in the countries where men are, tell people to stop hurting the animals?'

'Well, kings and queens don't often have much to do with actually making laws nowadays, but I hope they will help to put things right, for people like to copy what they see kings and queens doing. So if we can get all those kings and queens and princesses all over the world to show everyone how bad it is to torture the other animals, then perhaps it will not be done much longer.'

'But will they help our whales too?'

'I'm sure they will, Rocky, when it is all explained to them. You see, men are cruel to the whales to make money, although they make the excuse that it is necessary to get food. And those kings and queens depend on their governments to tell them truthfully what is happening, but governments are, I am sorry to say, often bad and selfish.'

'Are all men very stupid like that?—If we penguins were always busy hurting other people and ordering them about we would never have time to swim in the lovely sea and play in the snow. But I know too sometimes I have to make that girl of mine sit on our egg longer than she wants, for if I'm not careful I just get left to do it all.'

'You're a great wee lad, Rocky, but you should have

brought that little lady of yours along too, now that the baby can look after himself. But stupid, did you say? Man is probably the most stupid animal that has ever been. So stupid that he thinks he is the cleverest animal in the world. Rocky, I don't know just how to explain it to you, but the world of men is just now divided into two big groups with ideas called Communism and Democracy. No one knows really what any of it means. The Communists apparently want to feel powerful and make everyone else what they call equal and then order them about to do things, but they don't quite know what things or why. The Democracy people want to have what they call freedom for all, but apparently it includes freedom for themselves to hurt any other of the animal people whenever they want, for fun, or to make money. Lots of men, Rocky, talk about the slavery of Communism, and look surprised when they are told there can be no free Democracy that doesn't recognise the rights of all creatures. And through it all men fight amongst themselves and kill each other too.'

'But is your man animal happy in being selfish?'

'No, he isn't, but his brain is all upset with the mess of civilisation he has found himself in. The only hope is for him to get away from it, yet it has a terrible fascination for him that he doesn't seem able to shake off. But don't worry, Rocky. We'll keep fighting along to try and get him to see the bad things he is doing.'

He wandered slowly over to see if Rocky One had made a good job of the back of Gentoo's neck.

It was getting late. I picked Brownie up for a bit. She seemed much brighter as Rocky Two returned and nibbled at her beak. Gentoo was beginning to look a lot better too. I would have to be getting back.—Would Brownie be all right now in the dry tussac if she rested a bit more?—Yes, that was all fixed up. Rocky Two and his pals would look after her, for she liked the same food as they did and they were not particularly keen to go away for some days yet.

Then she could go with them, couldn't she? Everything would be fine.—Only, please would I watch the penguin people that were going to the place called Britain and see that they were looked after? Yes, and please would I remember to do my best for Whale?

They knew I would; had I not already promised that within the sacred walls of Penguin City four and a half months before? I took a bit more of the rather dirty butter off Gentoo with some dry tussac blades and stroked behind the necks of the three Rocky Musketeers. I was sad at having to leave Brownie, but she would recover now herself. I opened out one beautiful wing to nearly a stretch of two feet and she nibbled my finger with her yellow-grey beak. Then she was carefully settled in a clump of sheltered tussac beside the penguins and where the sea could not reach. I touched the top of that lovely soft head with my lips:—'Bye now, People. Keep away from old Leopard'—and set out for the shoulder above the light beacon.

A few more yards and a ridge would hide them. I looked back. Gentoo was continuing the cleaning after my efforts. The Rockies had moved up close to Brownie and seemed to be in deep discussion with her, probably about what she would like for supper. I tried to shout 'Bye . . .' but my voice just stuck. I waved, and,—yes, little flippers came up in reply.

* * * * *

The twentieth April, and *Harvester*, her tanks holding the last of the season's whale oil, was ready to leave for home. Some of the gunners had already begun to celebrate by a little alcoholic numbing of the higher brain centres and had to be humoured a bit. There is a lot of material for psychological study on a whaling trip. But they were good lads, and I know were thinking quite a lot about this harpoon question. They came along to my cabin, and would laugh when I told them what I thought of them having been whaling all these years and still content to use a brutal,

and one was wrong. Then they would turn thoughtful and agree I was wrong. But I was impatient to get something more than talking done about it. Another wanted to know why I had not spent as much time on his catcher as I had on one or two others, but they were all good-natured about things. I took the chance of putting to them our fears that perhaps gunners didn't want any new methods that would make killing easier; but they brushed that aside: 'Hell, Doc, there is not anything in being a gunner. It is just that we are willing to come down again and again because of plenty money. Plenty men too in Norway can shoot whales, but they would not leave work at home to come down all the years, see?' But amongst them is a rivalry and at times a sensitivity where securing whales is concerned; as though they felt their reputation was built on an insecure basis that would not stand any adverse luck and possibly end in another man being chosen in their places next time. But the gunner I perhaps knew best didn't appear to care whether he got whales or not. I never saw him flurried or upset, and he was more humane than the others in his killing; for he took more chances of missing by aiming at the vital area behind the head as the whale surfaced, rather than wait for the great bulk of the body to appear. Yet his score at the end was in the top rank.

Niall Rankin's *Albatross* had lain at a buoy in Leith Harbour for the last few days, with two deck crew in the shape of King penguins, George and Sarah, fastened each with a rope to one leg. There on the foredeck they stood contemplating the world in general, all the time shifting from one foot to the other in a rhythmic—pad, pad—that just never stopped, except when you visited the boat and they wondered if you had food for them. When I sat in the cabin below discussing various problems with the Colonel, the—pad, pad—pad, pad—pad, pad—went on and on. What did they think about? Were they unhappy now at being taken from their home?

The *Albatross* was brought alongside *Harvester* to be lifted on to our deck for the journey back to Britain. Slings were adjusted round the hull and Niall was on tenterhooks as, on taking the strain, the factory winch jerked its load against our plates. The officer superintending had evidently had just a tiny nip to fortify his nerve and confidently turned to us: 'Just fine. *Harvester* will soon be on board *Albatross*, gentlemen.' Rather what the Colonel was fearing, but his boat was ultimately safely in a cradle on the plan deck.

Johan Borgen was going back to his home in Newfoundland and would go to Rio with one of our catchers on its way to England, then fly to Gander. He came along with Thorvald, one of his pals, to see me before he sailed. I was glad he had had time to come, for there are a lot of things to be seen to in laying up a catcher.

We discussed our next plans, and then Thorvald said 'Doc, now we have talked about gunners. I tell you I was one time mate on a catcher with Johan here when we were not able to see many whales, and the gunner he enjoy himself with some whisky. It was not good weather, but suddenly we saw one single Fin whale. We chased him and everything was ready to tell the gunner. But he had been with so much whisky he could not stand up himself. Two men help him from his cabin to the gun and hold him up there. Then pretty soon—Bang!—and the gunner sit right down—Plop!—but the whale go right down dead at once. "Ah! splendid, bravo!" we say, but the gunner: "No, no, pah! it is nothing to kill one whale from in such a big lot."' Thorvald winked at me as he glanced at Johan.

But Johan, with his smile, was preparing to go: 'Some people talk plenty, Doc. Don't listen too much. Well, I'll be seeing you in Newfoundland perhaps—eh? There'll be some good times yet. I'm just going up to see Captain Begg.' And another chapter of *Treasure Island* went out and along the alleyway.

Chapter Fourteen

The Penguins go North



Behaving as they so often do. Rocky in front hurrying ahead of the aggressive little Chinstrap coming at him from behind. Then Gentoo much more sedate just as he is even when dealing with whaling station dogs. In the rear comes King with that disdainful rather superior air.

Kindness to animals is the hall mark of human advancement; when it appears, nearly everything else can be taken for granted.

GREY OWL

The Penguins go North

As *Southern Harvester* moved slowly toward the entrance to the bay, leaving the whaling station to the winter snows, the early afternoon sun in a clear sky made it pleasantly warm. Some of our penguins were not in the best of condition, and with the fish shortage it was decided to let these go. They walked with slow deliberation down the stern whale ramp, paused to look back as though they could not believe it true, then jumped into the foaming wash from our propellers. Instantly they were beings transformed with excitement. They rolled about, throwing the beautiful water over themselves, squawking to each other in happiness. How I wished we could release the whole lot. The Colonel I think would gladly have seen them go too; we were heartily sick of the callousness over getting the proper food for them. And as the little chaps toddled down the stern the Chief Engineer on the deck above was most emphatic: 'It's a damn shame. Doc, you can do something about it. Why can't we let all the poor little devils go?'

If he was miserable about it, I felt the same way. But this apparently was a Company's gift to the zoos, and I did want some co-operation over the whales. The present circumstances had surely not been thought of at home. But to upset whoever was responsible over the penguins now, I felt would just create resentment that would do more harm to the animals in the long run. Had I known then how things would plan out, I would have been convinced there was no possible justification for keeping any of them.

The average zoo seems so pathetic. There are those who say an animal in a cage is incapable of day-after-day longings

for freedom, and can be even happier than in the wild. 'You are wasting your sympathies,' they say. 'As long as animals have food, and a bed, and feel safe, they are happy.' So speak the warders of a régime that allows the animals no voice in the matter. Frequently the longevity of captive animals is stressed, but 'living' is so often confused with the mere continuance of the heart to beat, under a glossy enough coat though it may be. The human conscience can be so easily pacified. We are fond of talking about ourselves as freedom lovers. Humans are animals. Are they happier in prison? Who are we to say humans are the only creatures that should not be exhibited in zoos? Undoubtedly some animals get along well enough in captivity and can enjoy human company, but in these days, when excellent films can show the creatures in the happiness of their native haunts, were we not committing serious offences in putting such as our penguins in confining enclosures? Penguins in captivity may look reasonably contented, but just see them at their antics in their native land and there is no comparison whatever. We make great birds of prey that should be sailing the skies, sit moping on a bare branch in a small cage with a lump of meat in a corner. But along comes someone who is himself free to say it is all right, eagles don't really like to fly much. I wonder: is it captivity that has altered the spirit? And when a tiger has escaped and got its own back on its captor, it is the tiger that is shot as being dangerous, having dared to have thoughts of freedom.

So many zoos to-day are surely obsolete. The idea of having something to take the children to see is no justification. After the initial novelty, children get as much pleasure out of watching a domestic duck, and more fun with the cat at home than watching a great creature behind bars. I know some fine directors of zoos, genuinely fond of their animals, but many feel that the majority of these places as they are, are not right. Although in a few outstanding cases in more than one country they are setting

a fine example of what can be done, yet the misery involved so often in the initial capture and confinement of the wilder animals is deplorable. The answer probably is that what is all right for a few animals is all wrong for others.

Although possibly no zoo is more capable of taking care of penguins than that in Edinburgh, to where most of our birds were going, yet what we were doing still seemed so bad. But by the way it all looked at the time, we had to be content with seeing just a few of these little captives rejoice in their freedom.

In the evening sun we headed north up mid-Atlantic, while South Georgia gathered its clouds round the slopes of the Allardyce Range. The top of Sugarloaf prominent, with Paget in support. And gradually a rosy pink of extreme delicacy touched the higher slopes as though a special display for our departure. Or—was it at the instigation of Sedna that this Antarctic outpost was giving a welcome 'All clear' signal to all the other creatures, that man had gone for another six months, and they could be happy again? There were the headlands that protected Penguin City, and closer in, the cove where I hoped Brownie was happy as she gathered strength again, probably still attended by the Musketeers. It all faded, faded in the increasing haze, until gradually the whole mass of the island resolved into the great cloud canopy out of which it had appeared to us five months before.

One leaves South Georgia with a genuine love for all those friendly, happy, trusting animals that make it their home; and not just disappointment, but a revulsion from man and his hard commercialism that allows him to inflict such widespread suffering.

Day after day we retraced our Atlantic trail, while sea and air temperatures rose gradually. But as with all large ships, we were too high out of the water and too fast to observe much of the wildlife above or below the waves.

It was time now for beards to be removed; bit by bit

The officer of the watch shouted down from above: 'The *Saluta* coming, Doc.'

Our store-ship, she was now going over to United Kingdom ahead of us, and we had thought to play her out. So while I went for the bagpipes, the microphone set from the bridge to the loudspeakers was warmed up. As *Saluta* moved across our bows over the waters of the fjord, black smoke in a column from her funnel, we sent *The Road to the Isles* across to her, the boys aboard cheering back.

Our own anchor winch started up, while the cable bell sent its tinkles amongst the woods, and we followed out into a sunset rosy in the haze.

Chapter Fifteen

The Road through the Isles



Waiting to the last moment before diving away from our bow wave.

'The service we render to others is really the rent we pay for our room on this earth,' said DOCTOR WILFRED GRENFELL OF LABRADOR, and by 'others' he surely meant all the creatures of the earth.

with scissors and rather painfully by razor. Daily we found new faces on board that we had not seen since the outward voyage and whose existence had been entirely buried and forgotten. A beard can cover a multitude of sins and there were embarrassing roars of mirth when some of those sins were once more revealed in all their nakedness.

Our penguins were not very happy. Their capture in March or April is not satisfactory after the hard work of the breeding season, and in the case of those other than the larger Kings, the annual moult has followed to make their condition still poorer. A Macaroni was the first to die, in latitude 37° South. He had no reserve fat on him whatever, and there was inflammation of the stomach which contained some undigested whale meat along with partly digested fish.

The albatrosses escorted us again through their territory, and at 28° South what appeared to be a Kildeer plover sat with us for a while on a barrel on the plan deck. Two days later in 18° South, two Chinstraps died, both emaciated after being off their food for days. Excessive heat alone might have been enough to kill them so soon after the moult, and I could find no gross lesion anywhere in a *post mortem*. Next day a King went, and although well nourished, a dry white mould showed throughout the air sacs from the lungs, although the lungs themselves appeared normal. Was this the dread mycotic disease I had heard of as attacking penguins in captivity?

Our charges were in a weakened state and their food would have to be cut still smaller to allow them to absorb it. But even small pieces of whale meat with its rich protein seemed to lie as dead, indigestible lumps in the stomachs of the little penguins. It was bitterly disturbing to find one day the very fish we were so short of for those ailing little people appearing on the menu for the crew. Whose thoughtless bungling was responsible for this, no one would ever admit. The usual excuse was offered that nobody knew the

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fish belonged to the penguins, and anyway the men had to have a change of diet. Such continued selfishness was a tragedy to those of us concerned with our little passengers. How we wished we had left them all at South Georgia. We had an awful responsibility to them now.

As *Harvester* went through the tropics, they had to be sprayed with water four times each day, and I must say the men did what they could to help them, and awnings were stretched across above the skidway to keep off the hot sun. One thing had to be watched. A whaling factory ship on its way home from a season is cleaned down from top to bottom to get rid of all the greasy debris prior to a new coat of paint. For this cleaning, strong, hot caustic soda in water is used liberally, and when the winches and decks were being treated in the vicinity of the penguins, there was constant danger of damage to their eyes. This was got over by keeping the birds railed off as far from the area of operations as possible, but a responsible person had to be there all the time.

Surface sea-water temperature was now $84\frac{1}{2}^{\circ}$ Fahrenheit, and even with a breeze, the air temperature of $81\frac{1}{2}^{\circ}$ F. was a sore trial to little Antarctic natives. However, it was not long before northern latitudes began to give some ease.

On the 4 May in 10° North, a small, beautiful iridescent blue beetle sat on the glass of one of the portholes of the hospital with a 'Can I come in?' look about him. From where had he come? We were five hundred miles from the land of West Africa. Was it from there this tiny person's voyage had started, driven by the Harmattan winds? No, that wouldn't do; this was May and these West African winds would be over. He must have made the long passage from the Southern African lands, riding in the upper layers of the South-east Trades. Or had he taken passage on a ship until he got tired of it? But not another vessel had we seen since leaving South Georgia.

Shortage of fish for penguins was now serious, and we

had radioed ahead to another of the Company's ships to make arrangements for a supply to be waiting for us at St. Vincent in the Cape Verde Islands.

On the morning of the 6 May, the ragged, mountainous outline appeared ahead, and we crept in the dawn light toward an anchorage at Mindelo, in past the beacon flashing on its rocky island pinnacle: a compact town of 25,000 inhabitants, ringed by what appeared as barren desert hills. No fresh fish awaited us. Whether the message was mishandled or just again nobody cared we never knew. In the end, as a last-minute rush, native boats went out and we managed to buy some. But tropical and subtropical fish rarely have the food value of cold-water varieties. After the brief change seeing palm trees, and the donkeys that plodded along the dusty hill tracks, we sailed again the same day.

Shortly after, two Chinstraps, a Gentoo, and a King penguin died, all showing the same gross fungoid infection of the air sacs. Three had no sign of anything in the lungs, but necrotic patches in the liver. One of the Chinstraps had white points of lung infection, possibly having had better resistance than the others, but the covering membrane of his heart was covered with the same mould. The King and the Gentoo had whole fish still in their throats showing that the attendant who had fed them was still not interested enough to carry out the feeding instructions as to cutting the food into small pieces. The question was, had this mycosis developed as a result of captivity amongst humans, or was it present in the wild state? The answer is apparently still unknown. Sick animals disappear so quickly in their natural surroundings.

Three days from the Cape Verde's we were at Las Palmas, where the breezes were cool again, and most welcome fresh fruit came on board. Here another Macaroni died, with advanced inflammation round the gullet, which may have been from perforation by an unaccustomed fish bone, again from careless feeding.

On again northwards toward the more frequented shipping lanes, when a cargo vessel, the *St. Anton*, bound for Rio de Janeiro in the late evening, flashed us to know who we were. Twin-funnelled tankers are not common and generally excite curiosity.

Another five days and the Channel Islands were abeam; and grand again to hear the wheeling gulls after their more inarticulate cousins in the south. They are dour, silent creatures too, those I have met in Canadian and American ports. Are our British gulls a happier race that they have always so much to talk about?

It was in the Bay of Biscay that we had the last four penguin deaths, leaving the numbers of the small species considerably depleted. This time they were another two Chinstraps, a Rocky, and a King. No gross lesions in the Rocky and the King, and if it was a virus infection the spinal cords showed no inflammation, as was to be expected where the organism had killed them extremely quickly. The Chinstraps both had gross mycotic infection of the pleura, but only one with white points in the lung. In a general picture of all our deaths, the worst involvement of the air sacs was in those showing no obvious disease in the lungs. All livers were heavily bile stained, some with necrotic patches. The Kings remained in better condition throughout than the little penguins, the emaciation of the latter being very noticeable. This might well have been explained alone by the fact that the Kings had recovered from the moult two to three months before the smaller species had finished their ordeal. But in many cases could not internal parasites, which I was unable to detect and with which the penguins lived normally in harmony, have got the upper hand with the confinement and poor feeding?

At this later stage of the voyage, some of the small penguins, particularly the Rockies and Chinstraps, would in a few hours go into a state of coma following a period of standing with neck-retraction and running at the eyes, the

as jerking up wards and back. The coma lasted for a day or two, when they lay apparently dead, but recovery was complete, with no apparent after-effects. I was commencing a post-mortem on one, putting the nails through the flippers to fasten it out on a board, when one foot was suddenly jerked up. The post-mortem idea on that one came to an end, and next day the body was able to stand on its own feet. Was it as they picked up from humans which they overcame with amazing speed?

Clocks went ahead again half an hour as we steamed up the English Channel, but as the bridge again forgot to spread the tidings completely, there was another slight hitch in co-ordination. Meanwhile, another whale factory ahead of us had got herself aground more than once in the area of the Thames Estuary and had to pump part of her valuable whale oil cargo overboard to get free. You got the impression in this industry that a bit less of the smash-and-grab would benefit everyone. Oil strewn on the waters of the Antarctic, and now perhaps seventy whales had died solely that hundreds of tons of it should pollute the home waters. Hardly an advertisement for a business with much hope of a future.

May 17th and the south coast of Norway appeared out of a warm haze; and as we passed along toward Oslo Fjord, the forests of fir and pine seemed to come down to the water to meet us. At Tonsberg the anchor chain rattled again, a day under four weeks since we left Leith Harbour.

It was the end of the expedition for most of our Norwegian boys, flensers, cutters, factory hands, and men of the catchers. In front of us United Whalers' factory ship *Balaena* lay at anchor too, and beyond her again in the distance, with her teapot bow, the old *Antarctic*.

Gaily decorated private launches came out to pick up their men, while ropes, barrels, and sundry implements and bits of tackle went with them as souvenirs, doubtless to be put to good use. But we were leaving a dirty trail here as

everywhere. Fuel oil, apparently from our bilges, was leaving a black scum line round these beautiful launches, and as usual nobody seemed to think anything of it except the unfortunate owners of the little boats.

The hearts of our penguins were gladdened a bit at last, for we managed to get a supply of some of the loveliest fresh herrings I have ever tasted. They were no mean size, and I disposed of five at tea while Mr. Wilhelmsen the mate demolished eight, although, to keep up appearances of moderation, he had the first five in the mess-room and the other three taken quietly to his cabin. The penguins cheered up after their first taste. The 'Oh boy!' expressions on their faces were not imaginary. Happier little folk now, but how I wish we had had them treated decently like that from the start. This little extra consideration had come too late for so many.

As it got toward sailing time in the late afternoon, I stood by the rail beneath the bridge. After a warm day, the breezes played a little in the fir tops and passed on. What a treat it was to be again in such a pleasant spot, amongst a people who kept their country clean and tidy, and showed by example that every stick of timber in their land was precious. Beautiful little houses peeped out from amid conifers that were preserved with meticulous care right to the water's edge. None of the dreadful, open, mutilating slashes in woodland that mark the building of houses in some other lands where forest fire hazards are treated lightly. A nation conscious of a great heritage and its duty to preserve it. If only we treated all our wildlife the same way.

The Mate came and stood beside me, speaking in his pleasant, serious, downright quiet way:

'You would enjoy it here, Doc. My home, Sandefjord, is just over the other side of the land there. Yes, indeed, we like to take care of our trees. We will show you a lot that will interest you if you will come and visit us.'

The Road through the Isles

ACROSS the North Sea through a calm, starry night, and another calm sea all next day toward the Pentland Firth. Next morning South Ronaldsay on the starboard beam. We were doing thirteen knots through the water, but what looked like five over the ground. And off Stroma, the tide rip took our great bows right round through forty-five degrees. A plaything 32,000 tons displacement in a hurrying sea. At such times you look back thankful that the dreaded Pentland Skerries are well astern.

Then round the corner and into the Minch. Late on that May night the twilight held on, and in a glassy sea the Outer Hebrides chained out in a dark purple-black line floating on a wispy haze as though bedded on cotton-wool against the orange glow in the west. And in the early hours of the morning, a light away in the direction of Iona. A drifter?—perhaps; fading gradually into the light of another warm dreamy day when all creatures were content to go gently on with their way of life—Only man had to force through it all on a striving, fixed course, making all others get out of his way. Did he know himself where he was going? Did it really matter whether we went to Liverpool or to the Moon? Unless we were striving to make the world a better place than we found it, we would be just as well remaining permanently frozen into the Antarctic.

What had we accomplished in the last months? As an individual expedition, 1,743 whales had been killed, made up of 482 Blue, 1,226 Fin, 2 Sei, and 33 Sperm, giving us 115,864 barrels of baleen whale oil, and 1,430 barrels of sperm oil. In the old whaling days the oil was carried in

barrel, and the measure persists to-day, although the oil is now run into bulk tanks. At a measure of six barrels to the ton, our ship gave us nearly 20,000 tons of baleen whale oil alone, and fourteen other factories averaged much the same. The whales destroyed in the Antarctic in this single season would, if placed head to tail, stretch in one unbroken line from London to Edinburgh, nearly three hundred and fifty miles. Just one industry of many all driving to the final end, when evolution would have to try again, to produce some organism more satisfactory than man has been.

A Minister of the Cabinet in the British House of Commons once described the members of the opposing party as 'vermin'. He used the word quite wrongly in the political sense, although biologically he was less than half-right, because those to whom he referred were in a minority. Had he included his own side as well, he would have been wholly right. If the word 'vermin' is applied to any species of organism which destroys needlessly more than it can replace in its lifetime of the earth's natural resources of food and shelter provided by Nature, then man, leaving as he does a trail of devastation everywhere he goes, is the only organism so far known to biology which fits into this category. And no other creature in the history of this world of ours has, as far as known, ever become what we are so fond of calling a pest, without man having been the cause. Mice or rats, the rabbit people or the locusts apparently have multiplied out of all natural proportion, enough to cause trouble by daring to copy our destructive habits, only when Nature's balance of habitat and predator animals has been upset by the human species alone.

I pondered on all this in the bows as we passed the Mull of Kintyre; and as I watched the little puffins with their comical, indignant expressions behind their red, white, and blue beaks while they waited to the last moment before diving away from our bow wave, the herring gulls sailed low over us aft, talking to the penguins. Were they

welcoming them and asking what sort of a place the Antarctic was? Perhaps telling them they hoped they would be happy in this new land. The tranquil day was closing in as we altered course to clear the Isle of Man.

With the bagpipes I went up to the monkey island above the wheelhouse to put on one or two of the Highland song tunes. As the pipes played, the gulls one by one alighted on the rails beside me, so close I could have put out a hand and touched them. Perhaps for twenty minutes the playing lasted, the rails gradually filling up with this silent audience that overflowed on to the rigging of the foremast; and when we had ended with *The Skye Boat Song* there was a moment's silence. Then these gull people broke into a babel of yelling at the top of their voices—What is it about the bagpipes that has a fascination for the wild creatures? Is it the pitch of the notes that is just right for their ears? Seals are the same and will listen quietly with their heads just out of the water. Would a violin have the same affect? I don't know. Cattle react at once to the pipes and feel the urge to dance and caper when the pipe band of marching troops passes near them. But this was the first time I had found seabirds overcome their shyness in such numbers. I had played to the captive penguins at South Georgia, when they were politely noncommittal, certainly refraining from any signs of hostility. Bagpipes are certainly not everyone's idea of music, but surely it is not too late for man to sweep away the ugliness of his present way of life, and somehow get back into tune with the other creatures and the universe around him.

We nosed into Liverpool's Gladstone Dock, and while our meat meal went over the side in sacks to barges, and tankers relieved us of our whale oil, the penguins, now a little more like their Antarctic selves after their herrings, were introduced to those who would try to take care of them in their future homes the Edinburgh, Glasgow, and London zoos.

I stood beside Colonel Rankin as he superintended their transference from the pen to the box-trucks that would take

raem the final stage of their journey by road. The Kings maintained their dignity throughout, but the Chinstraps had to do a bit of clowning, and two in particular, even as they were being hoisted in a crate over the ship's side, tried to pretend they didn't care by having a violent quarrel in mid-air. We could only wish them God-speed, with a fervent hope that they would not be too unhappy. I saw the Edinburgh ones two years later. They seemed in good form in the circumstances, although one or two of the Kings had been lost with a type of dysentery.

Our voyaging was not yet over. South Shields was to be our fitting-out port to prepare for next season. So, after a few days, relieved of her precious cargo, *Harvester* again slipped out of dock and down the Mersey, passing another whale factory ship, the South African *Empire Victory*, as she came up the river. Just a skeleton crew with us now, and by the following evening we had left Skerryvore Light astern and the Outer Hebrides were again ahead against the sky.

I sat in a deck chair behind the bridge with a mug of cocoa. For me there was no question of it being the end of an expedition, but just the close of the prologue to a much greater one. The brutality of the explosive harpoon must be ended somehow. What battles against selfishness, apathy, and prejudice lay ahead were as well not thought about; it would have to be tackled bit by bit.

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But how had this whaling grown into the present murderous industry?

Over a thousand years ago man started the active pursuit of the Cetaceans, both Baleen and Toothed whales, following his discovery that specimens stranded on the sea beaches could provide him with food and fuel. An era of relentless hunting coincided with the industrial age, when by the middle of the nineteenth century, whale oil was mainly used as a lubricant, illuminant, and in the tanning and

textile industries. The fame of Dundee in Scotland as a whaling port was a direct result of the use of the oil for batching in the jute industry. Only in certain isolated areas of the Northern Hemisphere was the meat used as food by the human inhabitants.

A depression in the industry followed in the second half of the nineteenth century, when whale oil as the crude lubricant was largely replaced by mineral oils, and gas came in for lighting. But in the early part of the present century, physics and chemistry developed the conversion of whale oil into edible fat, such as margarine. This, with soap, and glycerine as a by-product, and high-grade lubricants, are some of the many products from the oil to-day.

In the early days, iron harpoons thrown by hand were used from row boats, based on land at first, and later working from sailing 'mother' ships, alongside which the whales were stripped of blubber, and the rest of the carcass discarded. Right whales, and Sperms, were then the animals hunted, species which floated when dead. Catching the Blue, Fin, and Sei whales was then not practicable, as they swam too fast, and sank when dead, so that no rowing boat could hold them.

A harpoon gun was invented and manufactured by William Greener of Tyneside and put into action in 1840, when it became standard equipment for Scottish light whale-chasing rowing boats. At the middle of last century, America was the leading nation in whaling, with over seven hundred vessels engaged mainly on Sperm hunting in various seas. But her interest was gradually lost with the counter-attraction of the development of the Western Prairies coinciding with depletion of the whales. Then came the day in the latter half of the century, when the Norwegian Svend Foyn produced a heavy 150-lb. harpoon carrying a delayed-action explosive head, fired from a heavy gun which was a development of the light Greener. But now mounted in the bows of steam chasing vessels, it

replaced the older weapons, and made the catching of species of the larger whales easy. Uncontrolled commercial exploitation by several countries followed, and by the beginning of the present century the stock of whales in the Northern Hemisphere had been almost destroyed.

A Norwegian whaling company started whaling from Durban in South Africa in 1908, and in the next three years a number of companies operated from shore stations on the African coast. But the main attention turned to the still virgin waters of the Antarctic following various reports of the great numbers of whales seen there. But financiers were sceptical, and not until the Norwegian Captain C. A. Larsen had aroused the interest of the Argentine, and the *Campaña Argentina de Pesca* was founded at Grytviken in South Georgia in 1903, did Britain and Norway follow by establishment of shore stations at both South Georgia and the South Shetland Islands. Soon after, floating factories made their appearance, a development of the older sailing 'mother' ships. The whales were caught by the same steam catchers, but instead of being towed long distances to land, were treated on board these parent ships, completely self-contained units, now steam-propelled and able to move to wherever whales were plentiful. This new version of pelagic whaling soon became a new menace to the stock of Baleen whales in what was previously their one remaining sanctuary on the globe.

By 1930 there were forty-three of these factories, mainly operating in the Ross Sea area. In September 1931, not a day too soon, the League of Nations drafted the International Convention for the Regulation of Whaling, concerned with the conservation of Baleen whales in their protection from indiscriminate slaughter. It became international law in 1935, and condensed in a few words it prohibited the taking of any Right whale at all, any Blue whale under 60 feet in length, Fin whale under 50 feet, or any female accompanied by a calf. As a true conservation measure it was a failure. There was no limitation of total catch, and the allowable

lengths of whales caught were far too small. In spite of the then Discovery Committee's findings by 1929 that the Blue whale is not sexually mature until over seventy feet, whales only sixty feet long could be destroyed, long before they had a chance to reproduce themselves even once. So in this present century we have seen an exhibition of man at his worst in one of his greed orgies. Year by year the slaughter has gone on.

There have been various amendments to the 1935 agreement, and in 1944 the limit to the total Antarctic area catch was imposed as the 16,000 Blue Whale Unit quota. The Washington Whaling Conference in 1946 established an improved Whaling Convention. The permissible Antarctic quota was not reduced but to be kept under constant supervision and the minimum lengths of whales to be taken were increased; for pelagic factories it was seventy feet for Blues, fifty-five feet for Fins, then Sei whales forty feet, Humpback and Sperm thirty-five feet, except in cases where whales were taken by land stations for the consumption of the meat by local aborigines, in which case the permissible lengths were slightly less. The taking of Grey whales or Right whales was not to be allowed anywhere except where the products were again to be used by local aborigines. The South Pacific from approximately Cape Horn to the Ross Sea, south of 40° South latitude was held a sanctuary for Baleen whales at all times and no Humpback could be taken anywhere south of 40° South.

This South Pacific sector reserved as sanctuary has proved of little value in the protection of the whales; for by observations of them there they do not apparently loiter in the area, merely passing through it on their way to other seas.

The working of such regulations, even such as they were, depended on international goodwill. Were those running the industry of sufficiently strong character to wholeheartedly co-operate with the inspectors on the factories in the strict enforcement of the regulations, and at once agree to further cutting down of the total quota and

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raise the minimum whale sizes at the slightest evidence of over exploitation? Or would commercial or national greed be dominant and demand a slackening of regulations under a plea of necessity, and that might only end up in a free for all? God forbid we should ever ignore the generations of the future to the extent of a repetition of the destruction that ended whaling in the Northern Hemisphere.

But as this 1946-7 whaling season ended, things were not satisfactory. After two world wars, and the tremendous increase in human population threatening a third, efficient food-production on land was suffering as destructive cultivation methods caused increased soil erosion. And whale oil, valued before War II at £15 sterling per ton, was now at £100 per ton. The season had seen fifteen factory ships with their chasing fleets from five countries in on the scramble, many of them large modern vessels similar to *Harvester*, replacing the ships of pre-war, most of which had been sunk by enemy action. And just as the power of veto inserted in an unrealistic moment into the regulations of the United Nations where wider international matters were concerned, so the Washington Whaling Conference of 1946 made provision for a similar veto, which might well be subject to abuse. The Conference established a permanent International Whaling Commission formed by representatives of member countries and with power to amend the whaling regulations. But any government which did not want to obey any particular amendment need not do so provided its objection was duly presented within a certain period.

What had this past season showed?—This deck-chair was so comfortable and the night warm enough, but the remains of the cocoa had gone cold beside me. The Hebrides faded into the skyline of South Georgia. A silent herring gull sailed past overhead, and there again was the tranquil, steady eye of the Wandering albatross. Once again our decks were a welter of blood, and the big bergs with their

wonderful colourings went drifting by in the twilight. Days of calm weather under an azure sky, but these sunny days spoiled by what they meant to the whales. The protective fogs and gales all too infrequent, days when the old hard-boiled whalers got miserable, but when those who felt that life involved more than the worship of oil, were grateful that Sedna still had some control over the fog curtain on that tragic stage.

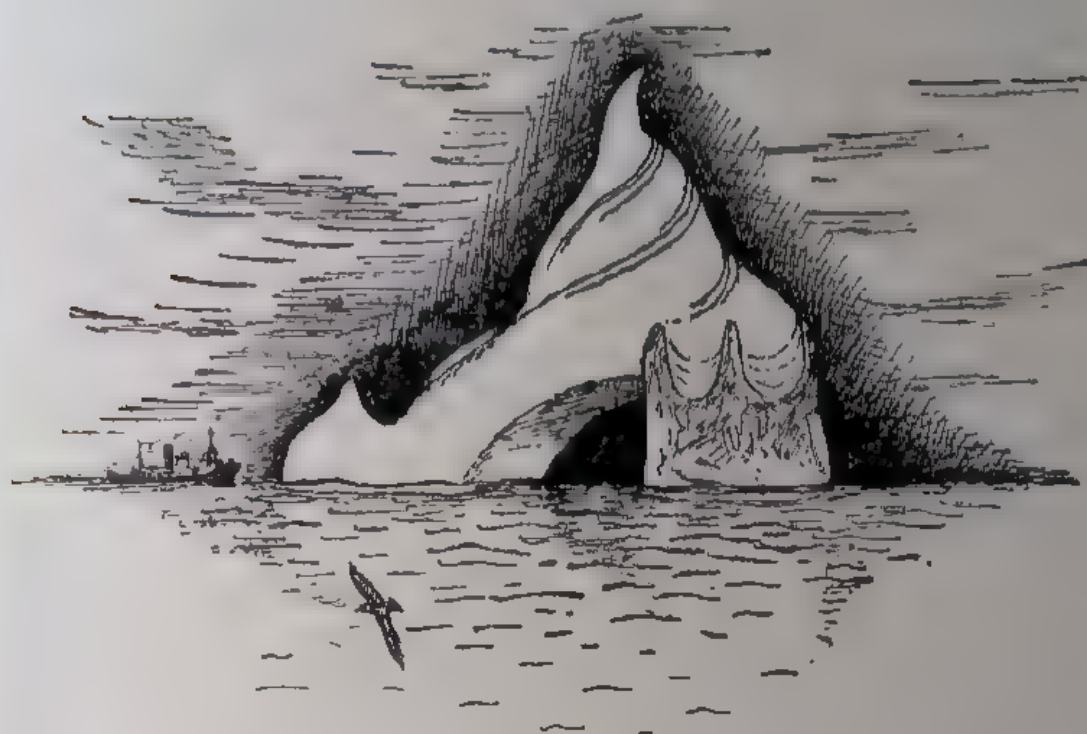
What a wonderful sight it had been to see a whale swimming, just the poetry of majestic motion, and to see one of these beautiful creatures pouring blood and gasping along on the surface towing a four-hundred-ton catching vessel on the end of a heavy harpoon rope was pitiful. To think that in this so called advanced age of men, so often an hour and more of torture was inflicted on a whale before the crucifixion ended in death. Radar, Asdic, and aircraft had been brought in to join forces with faster and faster catching vessels, but little or nothing had been done through all the years to ease the cruelty of it. Could we imagine a horse having two or three explosive spears driven into its stomach, then made to drag a heavy butcher's truck through the streets of one of our cities while it poured blood over the roadway, until it finally collapsed an hour or more later; then we would have a slight idea of what a whale goes through. But down the centuries, no matter what new torture civilised man invented for them, these creatures had suffered their agonies in silence.

The air was getting chilly as lights showed from scattered crofts on Skye on our starboard beam. Strangely silent ship sailing as though on her own, deserted by her crew. No penguin voices now and the whale ramp bare of everything. Had these months been just another dream?

Two more days and we were at anchor off the Tyne. But no little penguins came to warn us this time that we would lie another two days in thick fog before getting in to our final berth.

Chapter Sixteen

What must be Done?



As though the Giant of the Antarctic had licked his ice-cream cone and thrown it into the sea.—Such towering bergs of magnificent structure and loveliest colourings made you feel how punily arrogant we were in the immensity of it all.

I cannot provide you with that staff for your journey; . . . You shall cut it . . . every one of you for himself, and its name is Courage.

BARRIE: *Rectorial Address, St. Andrews University*

What must be Done?

THE fifth of June 1947 and we were alongside the fitting out berth at last. The engine telegraphs rang; 'Finished with Engines'. *Southern Harvester's* first whaling season was ended.

But in the hospital there was still a bit to be done: reports for the company, and everything stowed ready for a new medical staff next trip. Surgery and medicine on Arctic or Antarctic expeditions are very different from the routine of practices and hospitals in cities. In lands where icebergs one day drift placidly in summer seas, the world next day may be one howling gale. There the surgeon is his own radiologist, pathologist and theatre sister, and for a second opinion on any particular problem you have the nearest penguin or polar bear. When an operation has to be done, the ship's fifth engineer may be first assistant and one of the radio operators anaesthetist. Then the patient so often gets back to duty in much less time than at home, for he knows his mates are waiting for him and there is no taxpayer to cover an extra week off.

With eleven ships in our own particular whaling fleet unit, and two extra tankers and a supply ship shared with *Southern Venturer*, there had been five hundred men to be catered for, and it was a year when the accident toll had been heavier than usual. In a factory ship crammed from stem to stern with machinery for propulsion and the processing of whales, with little room for men to move around, accidents were to be expected. But *Harvester* had been a splendid sea boat, and although in the uncompleted condition of the factory not as many machinery guards were in position as

might have been desired, yet mangled feet and hands were very few. In view of the explosive harpoon still used in the killing, causing rupture of the intestines of the whales, I took a large supply of anti gas gangrene serum, but little was required, in spite of the whales being handled at times in a very putrid condition.

The hospital layout as finally planned on the factory was reasonably good. Five normal beds, with two extra isolation cabins for emergency, and an operating theatre equipped for every possibility. Portable X-ray equipment was a great asset. Originally the main hospital ward was fitted with eight beds, but in tiers. The upper beds had to be removed. The practice so common on ships of putting such beds one above the other is useless. If a case is bad enough to need hospital, the patient cannot be attended to properly in such conditions.

The whaling surgeon is likely to be busy at any time in the day or night during the three or four months' active whaling. During daylight hours, most of his work will be with the factory hands, but at night more of the catching vessels will come alongside for bunkers and stores and to get any sick men attended to, for only in serious cases will they interrupt whaling operations to come in specially to the factory. In addition to accidents there are always the few dental cases for extractions or fillings. And when he is out on catching vessels, radio telephone keeps the doctor in touch with the rest of the fleet. I would say to any surgeons who follow on my trail anywhere off the beaten track on land or sea; the animals other than men expect you to be able to handle their troubles too, so learn all you can from your veterinary friends. You may not meet another piglet with the art of getting a bit of comfort by false pretences quite so highly developed as in our little lead-swinger; but if you do, give him the benefit of the doubt. The other animal people don't get many breaks in this man-dominated world.

The hospital was locked up finally, and I took the keys

for safe keeping to the bridge. Looking out from the wheel-house on this busy river metropolis again I could only wonder—was this smoke, grime and dirty water on the same earth as Penguin City? What was Brownie doing? Flying as well as ever perhaps after the Musketeers had done a good job. Perhaps they might all be inseparable from now onwards, and Gentoo once more his old self too. I crossed the plan deck for the last time, where the bodies of so many great whales had been pulled to pieces. Once again cascades of white-hot metal were showered around as oxy-acetylene cutters went through deck plates on alterations. How short a time it seemed since the welders sprayed molten metal in a last rush to get us away. Yet how little did I realise then, as I had stood talking to Walter, how much cold cruelty would be revealed in an industry stripped of the false mask of previous journalistic glamour.

A taxi took me up to Newcastle to catch the 'Night Scotsman' for Dundee with my baggage, and the boxes of formalin-injected baby whales, sharks, crocodile fish, pickled whale ovaries, testicles, thyroids, pieces of jawbone and bottles of krill and phytoplankton destined for the University.

A few days on the banks of the Tay to settle business affairs, then southward again to London on the preliminary reconnaissance for a humane harpoon.

And London again was an anticlimax. Seething humanity and irritable motor horns. Was it not Gino Watkins and his companions of the Greenland Ice Cap who had felt the same reaction?—'We returned to civilisation full of enthusiasm after a year of glorious life, to find a cynical, damping world peopled mainly with business-men whose outlook was entirely different from our own. After the joy of the first, long-looked-forward-to bath and reunion with old friends, everything tended to fall flat.'—And returning from the prison camps of Hong Kong, had it not been the same

with our passengers? Yes, the world of men was divided into two camps in more ways than one. There were those scattered over the globe trying to live in harmony with Nature; and those who segregated themselves from her in a civilisation that was becoming more and more strangled by its own selfishness. And the latter group was divided by fanatical creeds that might well end in the extermination of the whole. The other animals had been the friends of man in the past; we had to try to save them from getting mixed up in the debacle that was looming ahead, and with the whaling industry showing an increasingly avaricious outlook, there was little time to waste.

But this noise of humans and their traffic was not helpful in the working out of the problem. I retired again with the foolscap for a conference with those wise old owls of Richmond Park.

If some of our whales really had to be deprived of their lives for our benefit, the least we could do was to do it kindly. How then could we get close enough to them to accomplish this? Could they be paralysed painlessly to prevent them getting away? Drugs such as curare or hydrogen cyanide might be used, fired into the muscle of the whales in a dart from a light anti-tank type gun or by rocket propulsion from a weapon of the bazooka class. The propelling tail flukes of the whale would be the first part to be affected, when the catcher could then close in to a certain kill. I had a number of conferences with Dr. J. W. Trevan and his assistants of Burroughs Wellcome & Co. at Beckenham. No, it wouldn't do. The cost of curare enough to affect a whale would be excessive, and in any case the whole world supply would not meet requirements. Hydrogen cyanide would be dangerous in view of the possibility of pockets of the drug left unabsorbed in the meat when frozen. At Beckenham they went into all the other drug possibilities we could think of. There was nothing suitable, although it was of interest that aconite had been used in

whaling by the aborigines of Asia and America. It was again too persistent a drug for our purpose.

Was there then another way of keeping a whale from diving while it could be approached and killed at once? Could compressed gas be fired into it that would be released comparatively slowly to avoid rupturing the intestines? We had used liquid oxygen in a mixture of carbon black and dirt as an explosive for rock blasting on a hydro-electric scheme in Scotland, but anything in the nature of an explosion was barred in this whaling problem. Overlooking the trees of Hyde Park, it was discussed with Mr. S. S. Watts of the British Oxygen Company. Liquid air would only be possible if a container in the harpoon could be filled just prior to the moment of discharge. This alone would put it out of consideration; but in addition, although a liquid air charge at guess would take about two minutes to evaporate inside the whale, would the nitrogen not come off first, leaving an explosive mixture? Carbon monoxide would be dangerous to handle. The possibilities came down to carbon dioxide and nitrous oxide. Buoyancy required to prevent a whale submerging would be with about 150 cubic feet of expanded gas, and a mild steel cylinder to carry this in compressed form would be too large to be fitted to an ordinary harpoon. It was essential at this stage that the existing equipment should be adapted as far as possible.

But carbon dioxide might in addition act as a narcotic or cause quick death by forming a gas embolism in the whale's blood circulation; also its presence in the blood would improve the keeping qualities of the meat. Yet the use of gas was likely to be very inefficient if the harpoon did not strike close to main blood vessels somewhere in the forepart of the body. One of the catchers attached to United Whalers' *Balaena* had tried carbon dioxide compressed in a harpoon head, when the whale on which it was tested apparently died quietly in a short time of minutes. But from reports, nothing it seems would induce the gunners to try it again.

Sir Robert Robertson, who had been Chief Government Chemist in London, suggested that a small missile using high explosive would have much greater killing qualities than the existing black gunpowder. But there would have been danger to whalers from misfires embedded in the carcass during cutting up, and even if a long range non-explosive high-velocity weapon was used it would only encourage mutilation of whales which would never be recovered, while the damage to the intestines would still be there.

One method remained, and fortunately the most promising of all,—electrocution; by a harpoon transmitting an electric current from a generator on the catching vessel, the current passing by an insulated copper cable incorporated in the foregoer rope trailing from the harpoon as it fired. The Germans apparently considered electrocuting whales last century, and there were records of tests carried out from about 1929, but these were lost during the last war years, and with the death of the engineer investigator, Dr. Weber. However, bit by bit these reports of the work already done were coming to light again. The Norwegian Whaling Council in 1933 set up a committee of investigation based on the German work, but following some tests using 200 volt current at 50 cycles from generators up to 10 kilowatts, the matter was dropped.

Electrocution is possible in whaling largely by reason of whale blubber being an insulator. As the harpoon penetrated the whale's body, a contact switch on the catcher would make the harpoon electrically alive and the wound through the blubber would close round the rope behind the harpoon. The current passing from the generator into the whale would go out to the sea water almost entirely by way of the creature's mouth, apart from the genitals and anus the only part free of blubber, passing through vital organs in its path. The whale could surely be quickly stunned if not killed at once, with no mutilation of the intestines; and

with little or no strain on the foregoer rope there would be great saving in wear and breakages. But we realised our knowledge of the action and path of the current was still meagre. When a mammal dies quickly from an electric current the lungs often remain inflated for a time. The whale has thus not the same tendency to sink immediately on death as it does with the explosive harpoon. Apart from the solving of the cruelty problem, the enormous amount of time saved would be the greatest factor, and with the general adoption of such an electrical harpoon, the existing three or four months Antarctic season might well be greatly reduced.

The Universities Federation for Animal Welfare in London had taken great interest following a message sent from the Antarctic. They had then kindly arranged a meeting in the University of London to allow the situation to be explained to our scientists and representatives of the British Government Ministries and others concerned. Lantern slides from the pictures I had taken spoke for themselves, and the discussion afterwards was valuable. Major Hume, chairman and founder of the Federation, always ready to help, took particular interest in the tackling of the electrocution problem.

I was sorry that the whaling company with which I had been in the Antarctic could not see its way to helping in the research. So I turned to United Whalers Limited of London, owners of the new factory ship *Balaena*. They had already shown their capabilities in trying out new methods in other things. I certainly did not expect to meet a man with the kindness toward the wild creatures shown by Sir Vyvyan Board, one of their directors. It was in the lavatory of a London club that I first learned from him that although world-travelled in business and otherwise, he was able to say he had never killed any animal for fun; the procedure that to-day so often goes under the false name of sport. Sir Vyvyan was interested at once, and so it was by no means

from the economic aspect alone that he was eager to fall in with the idea of having the whales taken humanely.

It did not take United Whalers long to get down to the experimental fitting out of a whale-catcher, shouldering without question the burden of all expense that would before the end become formidable in this research that might well take years. The checking of the German current and voltages used was the first thing, and the General Electric Company of England with its associated cable works was brought in. But right away it was a struggle to get the necessary equipment and much of it had to be make-shift. The Antarctic to so many of those at home and in government departments seemed an almost mythical land barely attached to this planet, and reports of an industry down there wasting products to the extent of many millions of pounds sterling annually, was something very vague and its importance not readily grasped. But interest was spreading. The Department of Scientific and Industrial Research and the Ministry of Supply were willing to do what they could. And the appeal of the whales had reached from the National Union of Seamen to the driver on the footplate of the Aberdeen express taking me to the meeting of the British Association in Dundee. At Edinburgh he drew pictures of an electrical harpoon with his finger on the side of his great blue-painted locomotive, appropriately named, from the southern whaling aspect, the 'Union of South Africa'.

United Whalers' *Balaena* sailed in October 1947 for the Antarctic once more, and it was hoped to have one of her catchers electrically equipped for test before the season ended. The Company was now also going to try to reduce the waste from decomposition of the meat by using two converted naval corvettes as butcher ships: their function to be the taking over of whales from the catchers, eviscerating them to let cold sea water into the intestinal cavities, then speeding up the time of towing back to the factory. It would be a temporary expedient until the explosive harpoon

was abolished, as the real damage was done to the meat while the whales were in their long struggles before death.

In London the difficulty in getting test equipment continued, and with the hope of making headway by rousing wider interest, I decided to sail for Canada and the United States, combining medical work in the process of getting into co-operation with the authorities out there. Little did I realise how the future would prove Sedna to be still stage manager in the affairs of men as well as those of penguins.



Chapter Seventeen

To the Land of the Bald Eagle



Ye who love the haunts of Nature,
Love the sunshine of the meadow,
Love the shadow of the forest,
Love the wind among the branches,

Listen to this simple story,
To this Song of Hiawatha!

HENRY WADSWORTH LONGFELLOW

To the Land of the Bald Eagle

WITH Canadian Pacific, the company under whose flag in convoy I had gone for a little involuntary wartime night-life in a row-boat in mid-Atlantic, I found myself this January morning 1948 again out in Atlantic seas. *Beaverdell* (Captain Duggan), light in cargo, wallowed around, and when the seas allowed we exercised an Alsatian and his other four-footed, pedigreed fellow passengers emigrating on their own. Off Newfoundland's Cape Race, the temperature went steadily down, and a cold wind in Saint John at 17 degrees below zero made our Antarctic summer seem like a heat-wave. But in the comparative shelter of the transit shed where we berthed, a pigeon was feeding a recently hatched youngster. Canadian pigeons are tough little guys. And in lodgings in Saint John I wakened in the night at the touch of a very small person on top of my red blanket. As the light went on there was Micky Mouse himself sitting up washing his face. The movement of my leg didn't seem to worry him. He was just like Chinstrap penguin on his whale. Then he wiped his whiskers, ran over the edge of the bed and I went to sleep with him doing gymnastics among the wire springs under my head. What a happy omen for the friendliness of Canada.

In Ottawa the Federal Government—in particular, its Department of Fisheries—was interested in our whaling problem at once, although Canada's whaling enterprises are on a small scale and she has no pelagic factories. Knowing this, her representatives at the International Conferences have been too modest in taking only minor parts in many of the discussions. But the small scale of her whaling is the

very thing which gives her a clear focus on all aspects of the industry in every part of the world unhampered by the bias of nationalism or monetary exploitation.

In the corridors of Ottawa's Parliament Buildings I was introduced to many of Canada's representatives by Tom Reid, an M.P. and fellow Scot. It was good to hear them:

'They think they're something here, Doc, but just a lazy good-for-nothing bunch if you only knew. But I'll hand it to them. Do you know what these agricultural ginks are doing now? Damn it, but they're trying to cross a mule with an Ayrshire to get milk with a kick in it.'

That was Canada all through; open-hearted Rabbie Burns loons who gave a hearty hand-grip and told each other frankly their characters in their own way. You knew where you were with men like that.

When the Canadian Broadcasting Corporation came along for Trans-Canada talks, the key they gave me was: 'Remember in addition to our cities you will be talking to the cattle country, the ranches and the cowboys of the foothills. They know the history of the mad slaughter of the bison in this country, and will see the whaling story in the same light.'

I never expected the re-broadcasts that went through after that, and the tiny shacks in the backwoods from the Alaskan border to Labrador that reported they had picked it up. The Canadian dailies got on to it. In Ottawa: 'Inhuman Whale-killing Methods Blasted.' Montreal: 'Enough Whale Meat to Feed U.K. if Killing Changed.' Vancouver: 'Wired Death Plotted for Whale Herd.'

And the usual banter went on.

'And, brother, they tell me whales are mammals.'

'Sure they're mammals, you mug. What the hell did you think they were—insects? Doc, we have some ignorant hobos in this damn' country.'

Then into the United States at Detroit, where the Immigration girls were ready with their banter too: 'Any

contraband? Yes, let's see the lantern slides—educational, O.K.—but say, these are kind of interesting. And look here at this penguin Diana; isn't he just cute?' Did anyone ever tell you the United States folk were always in a rush? Well, those penguins and seals and whales put on a little show of their own, while the Immigration world went by around them.

What buses these are that transport you by road in Canada and the States. Rolling night and day from the Atlantic to the Pacific. Capacious luggage compartments allow you to take as much kit as you like, and when you want to sleep, your armchair seat-back reclines for you at the touch of a handle.

Through the great Holland Tunnel at 6 A.M. and out into the still-quiet streets of Manhattan like deep rabbit runs among the skyscrapers. But it would not be long before the crisp morning air would warm up and dissolve before the onslaught of the hordes of buses, trucks and autos belching gasoline fumes. The *Queen Mary* crept round from the Hudson River into her berth in the midst of it all, bringing a breath of home. That night from a tiny room high up in 34th Street, I could see the full moon glowing red through the haze behind the silhouette of the Empire State Building. But prices were high and dollars short, for a lecturing cheque had not arrived. So after two nights of a man-made bed, the Central Park helped me out. Food was a problem for some days when I could afford just over half a dollar a day, but a shop in 9th Avenue, after an accidental fire, came to the rescue with peanut butter at half-price.

Official appointments allowed no time for even casual labour earnings; but it was all for the whales, so what did it matter? There was the occasional pavement wanderer who would stop you to ask the price of a bowl of soup. When I explained to one that I was in the same boat as he was, he confided to me that he made thirty dollars a week at the game. Well, well, London had her little ways too.

Newspapers talked once more of war, and now came news of Field-Marshal Smuts' defeat in the South African elections. Trouble was at its height in Palestine. Ambush and death in that lovely land. How sick the world seemed, just as it had seemed sick by the news that reached us in the Antarctic. I turned into 68th Street, and up on the façade of Hunter College above the sidewalk carved in large letters in the stonework were these words:

WE ARE OF DIFFERENT OPINIONS AT DIFFERENT
HOURS BUT WE ALWAYS MAY BE SAID TO BE AT
HEART ON THE SIDE OF TRUTH

Ralph Waldo Emerson

In how many countries could such a piece of architecture be upheld now? Perhaps not many, for the meaning of the word truth had become clouded. But the main thing was that men were fighting back against the forces that maintained that truth was wrong.

As I looked up and read the words, passers-by looked up too to see what it was all about. They had probably passed that way very many times; was it possible they had never noticed them before? And in the Avenues not far away, humanity milled back and forth, blaring auto horns in the midst, while fire engines and ambulances showed off, careering through the traffic with screaming sirens. I wondered just how desperate these fire alarms really were, and whether the ambulances contained perhaps just a broken ankle or a chronic appendix that would wait half an hour at its destination without harm while the house doctor finished his coffee. But they all seemed so serious about it all. And the patient, if he didn't feel too bad when the journey started, would certainly be convinced on arrival that he must be at death's door. Or perhaps the feeling of importance had a high psychological value. But it hardly fitted in with the wounded animal's instinct through the ages to creep away into quiet hiding.

I had to push on; the country was becoming engulfed in a Presidential election, and the whales' problems would have to be attended to before election fever made everyone oblivious to everything else.

Fortunately for the dollar situation, I had booked ahead earlier, and again a long-distance bus left the lights of New York behind, and stretches of open road allowed the stars a chance against flashing neon signs. Late the next night, approaching Washington, we drew in at a roadhouse for a bite of food. The air heavy with subtropical scents, and the fireflies on the bushes and long grass sent out their tiny light flashes to their possible mates; a much more important business in their little world than our advertising flashing exhortations were in ours.

Washington, wedged in on the borders of Virginia and Maryland, produced its usual hot, sticky, sultry weather of summer relieved by thunderstorms that deluged the White House, the Capitol, and all the attendant departmental buildings that made up the seat of government of the United States. Everyone was kind, and at least gave the impression of being sympathetic with the whales, which to them in this American city must have seemed fabled creatures from the great unknown. For almost a century had passed since the last whalers had gone out from New England.

The United States National Museum, under the direction of Dr. Remington Kellogg, had of course a long-standing contact with Antarctic whaling, but others now too were taking an interest. The International Resources Department; the Office of Foreign Activities in the Department of the Interior; the Food and Agricultural Organisation of the United Nations; and the Economic Co-operative Administration handling Marshall Aid to Europe; all listened as much as their way of life allowed. And so often their question was: 'Do the British authorities not realise that the stoppage of the waste in whaling is so important? Were dollars being got too easily?' I wondered myself if it was

a case of apathy from too easily obtained help. The difficulties in getting harpoon testing equipment hardly seemed genuine. Infinitely more complex problems had been quickly solved and new methods adopted when war emergency demanded. It seemed to be a case of the one or two live men or the job in London battling to lever others out of the ruts of custom and indifference into which an ending of the latest war had allowed them once more to sink. United Whalers were indeed straggling on. Yes, just what obstructions other than technical were they having to overcome?

Back to the north, I found Canada tackling a forest fire problem, and in the hall of the Canadian Broadcasting Corporation offices in Toronto a poster got you where you couldn't miss it:

Chaperone Your Cigarettes
Don't let Them go out Alone

But the reek of trees being burned alive was everywhere. And over the air from the B.B.C. came the news from Europe: The emergency Berlin Air Lift—Tito, head of the first satellite country to defy Moscow—And the voice of Australia's Prime Minister, Mr. Chifley, stated in no uncertain terms that unless Australia got ten million Britishers quickly, she could not do much in Empire defence. She had offered to take over part of the United Kingdom National Debt along with large scale movement of industry. If that word 'industry' was to mean preference to the urgent emergency of reclamation of the spreading desert and reafforestation, with reversal of the human drift into the cities, then it sounded sheer common sense. If Australia could really handle this, could such an offer be turned down in face of a shrinking economy at home?—Through it all in a temperature of 83° Fahrenheit the smoke of those forest fires drifted through Toronto to mix with the sticky aroma of human bodies. Thunderstorms had occasionally started these fires but the authorities had found that 85 per cent were from

human carelessness; and so went on the torturing to death of the resources of this Dominion too.

The whales' business trail led on steadily westwards. In Manitoba you leave behind the last of the Pre-Cambrian Shield country with its smooth, glacial-scoured rocks amid the poplars and black spruce, that stretches with its countless lakes-of-the-woods up from the Great Lakes toward Hudson Bay. Out into the moonlight-flooded Prairie beyond Winnipeg in another luxurious Canadian bus there was a feeling of relaxation I had not known for a long time. The Prairie at night, with the glow from the previous day creeping round to the north has almost the feel of the open sea.

But Canada does have some shocks for the traveller from afar who is in any danger of becoming too relaxed. Into Regina in the early afternoon of another summer day we were in time for the annual Stampede procession. But in front of a pipe band in the tartan of the Camerons was, not the drum-major, but a drum-majorette in silk trews and kiltiettes twirling a little baton. A neat, pretty girl; her exhibition was well done and I noticed particularly she did not chew gum as she did it. In front of a brass band it would have been fine, but ahead of kilted Highlanders it seemed frivolously out of place, giving you a more sad feeling than on seeing a brass band in kilts. As I retreated to the bus I realised that probably it was myself that was out of place, for why should the type of show that often appears in a music-hall be out of place in the street? After all, you couldn't expect Scotland to the Canadians to-day to be anything other than in the category of the land of their own one-time Redskins, and the traditional Stampede was just being adapted to continue to live in an age which looked on newspaper comic strips as part of the educational system.

Beyond Regina, the Prairie much flatter with white and yellow clover and boxtail grass, over pastures toward lakes of solid sodium sulphate, relics of a trapped inland sea. At

Medicine Hat the South Saskatchewan River has eroded a valley two hundred and fifty feet deep down through the prairie strata, leaving crumbling canyon faces, and amongst dwarf cactus you disturb brilliantly coloured grasshoppers at every step. And you can rub your biological eyes and wonder. Just what sort of place is this? Have the Indian Medicine Men left living results of their art? For the most amazing creatures apart from humans live around the Hat; tropical spiders and Horned lizards. And Professor Strickland of the University of Alberta apparently adds termites and Kangaroo rats to the list, suggesting they have been there millions of years and escaped the Ice Age. I think if I had met a caravan of camels leisurely crossing the Canadian Pacific Railroad tracks I would not have been surprised.

Then the next shock came. They broke the news to me gently as possible. A bye-law in Medicine Hat prohibited the playing of bagpipes in the open! What Strathspey-murdering enthusiast can have been so oblivious to all around him as to upset the City Fathers by going so far as to drown the broadcasting of their favourite radio crooner pouring out his soul on behalf of Dr. Ronnie's Little Red Regulating Tablets? And to think I had been told that Canada was more Scottish than Scotland. Well, my kilt and bagpipes were in my bedroll; it would perhaps be best for them to stay there.

In the afternoon sun the bus climbed out on to the flat Prairie again with the course set for Calgary, two hundred miles away. But the gasoline tank had developed a steady-flowing leak and it had to be a race to get there. Over the great straight stretches of anything but smooth highway the speedometer needle flickered between sixty and seventy with the springs bottoming as she plunged. We just had to come almost to a stop once to let a badger get safely across, and he obviously had no built-in gas tank to cause him to be in any particular hurry. At brief rest stops the fluid trickled steadily, and anyone who so much as put their hands in

their pockets felt all eyes on them in case they should feel like even looking at a cigarette.

Then Calgary late at night in the dark for a change of buses for the last long lap to Vancouver. At Banff under the Northern Lights, deer sniffed around the cars parked in the streets. Five o'clock in the morning—Lake Louise and the heavy scent of the pine and fir; and an hour later the west-bound Canadian Pacific Transcontinental train was beside us for a few minutes, only to sheer off to snake round in the spiral tunnels below Kicking Horse Pass. The site of what, once an engineering nightmare, became a triumph.

The last quarter of last century, at a time when isolated British Columbia threatened to go in with the United States, Canada's Federal East held them by a promise to link up by punching a trans-continental railroad through the Rockies in ten years. It was a tremendous task, and years of muddle brought an ultimatum from British Columbia. The administration issued a dead-line date for the completion—or else. The Federal Parliament in desperation turned to private enterprise. The Canadian Pacific Syndicate was formed that was to save the nation from disintegration. In less than five years of work in soul-freezing temperatures the job was done. Would we not do well to remember that story to-day?

A steady descent now by the Kicking Horse River, down over twelve hundred feet to the isolated railway depot at Field where two Black bears by the roadside looked most indignant at our disturbance of them at their breakfast explorations. A little further on, a signboard,—‘Animal Salt Licks Here’—Now I wondered, was this just for the other animals to read or for humans too? Spoor was all round. Why should animals be so attracted that they will travel miles to reach natural isolated pockets of salt, or salt laid out in the woods for them by human hands? Moose, deer, and mountain-sheep will come regularly to these places. Porcupine will chew your axe handle to get the salty sweat from your hands, and

Rabbit will soon find your salt-bag if you leave it around the tent. Do they all really need it for their metabolism in quantities that Nature does not normally provide? Or do they just like the flavour, as humans do? Perhaps all of us and mammals, and probably the birds and reptiles too, are missing Mother Sea from whom we all came. Through the millions of years of evolution we have not yet become completely adapted to life away from her. We still, and probably always will, have the physical longings to go home.

Down through the gorges and the canyon of the Fraser River the night closed in again, now with the added smell of the cedars.

Next morning brought the comfortable farm and orchard lands outside Vancouver where the beautiful little Garter snakes basked in the sun and flickered their little forked tongues as they sized you up, and tiny humming-birds darted in and out of the flower beds like bejewelled, high-speed bumble bees.

August 1948, and whaling was now going ahead from a shore station at Coal Harbour at the north end of Vancouver Island. The operating firm, the Western Whaling Corporation, had started the station with a catching capacity of about 200 whales during the season confined to the months of summer; the oil being destined for the same purposes as that from the Antarctic, although margarine was then not allowed by law to be sold in Canada. Reasonable enough in a country where milk was in sufficient quantity to be fed to pigs. Hop-growers too in British Columbia were spraying their plants with nicotine sulphate in a whale-oil base. Were they going to find as in Britain that interference by the use of chemicals killed one insect, only to upset the delicate natural balance and allow others even more virulent to take its place?

But now I wanted to get a record of part of the whaling in slow-motion ciné film to show how the actual harpooning

here as in the Antarctic was being wrongly done. Camera gear had to be got ready, and although the dollar crisis I had experienced in New York had been relieved, yet the financial shortage was always present and the constant factor in slowing up progress.

At last on the evening of the 12 August the big motor seine-net fishing vessel *Eastisle* cast off from the wharf at the fish cannery of her owners, British Columbia Packers, near Vancouver. Down the estuary of the Fraser River past the salmon-fishing boats as they worked at the gill nets for the Sockeye, and as darkness fell the lights of Victoria on Vancouver Island on the starboard beam. Out into the Pacific, north-west up the coast, at nightfall to tie up at a lonely fish-packing station. Refuge Cove, nestling amid the silent forest, where another four dollars were added to the finances by the icing of salmon until 1 A.M.

On again at daylight, and when thick fog came down we navigated the narrow passages between islands by the echoes of our siren from the cliffs and wooded hill slopes on either side. Effective, but only as crude a substitute for the radar that was evolved from it, as radar is a crude imitation of the navigational methods of our little bat friends. Tofino, Nootka, Tahsis, place-names peaceful in their very sound. And Ceepeecee, where the little Ahousat Indian girls superintended our unloading of fish-boxes.

Late the next evening we glided over glassy waters into Queen's Cove. I was down below at the camera when Archie MacKinnon, the skipper, who hailed from North Uist in Scotland, shouted down from the wheelhouse: 'Doc!'

'Hello, Archie.'

'Bring your pipes up, Doc. The whistle's got stuck.'

So over the calm waters we sent the *Road to the Isles* once more, just as fifteen months before in Norway.

The packing station was built as a great heavily timbered, log raft moored just off the woods, with living accommodation attached to a small community store and the fish

packing shed. Other log shacks were in the vicinity. At our signature tune an apparently dead settlement came to life. Old Jock Duncan came out to take our mooring rope. Archie was beaming: 'How's that, Jock?'

'Yon's fine, Erchie; yon's fine, man.'

Mr. and Mrs. Perry, who ran the store, had two delightful little girls, Betty Louise and Marjorie Anne, aged nine and seven, who just adopted us on the spot. Here we unloaded more fish-boxes amid hilarious games with these young ladies, and when all were tired out we cooled off with tubs of ice-cream. Then old Jock's poisoned thumb had to be dressed, and treated psychologically with more pipe music. The Indians came alongside with their tunny and salmon reel-trolling boats, listened silently to the pipes, then solemnly asked: 'More, yis, please.' Until we all felt sleepy and reluctantly decided that bed was called for. 'But just a little more, Mummie, please.' And a little more, and a little more it was, until the wee sma' oors, when there were still more medical consultations to be completed.

In Vancouver I had asked medical authorities whether I could tell them back home that more doctors were needed. The reply was that there were twice as many doctors in Vancouver as they could do with and a British medical degree was not recognised by itself. The eternal psychology of a young country. Yet here up the coast of Vancouver Island it had taken two days to get a doctor to a broken leg. Throughout much of Canada it is the same story. At one time gold-rushes were from the cities to the wilderness. Now doctors crowd into the cities where the dollars are, but all they really accomplish is to miss the things of real value in life while the people in the backwoods fight on by themselves. I bow particularly to these pioneering women of the frontiers who have certainly cut their staffs of courage for themselves. Education of their children has influenced many doctors, but there are others lured it would seem by material gain to pursue their calling as servants of a mere civilised

régime. It seemed sad that these city men could not even organise themselves to go out and help their colleagues in the wilds, each man for even a few months every few years.

At 6 A.M. we quietly cast off to avoid wakening the sleepers of the raft who had been such kind hosts. Seven hours later, after a turn out to sea past Cape Cook, we entered Quatsino Sound, gliding past tall timber to Winter Harbour. Three hundred and fifty miles from Vancouver. It was as far as *Eastisle* could take me. Coal Harbour whaling station was thirty miles further inland up the sound, and the smaller motor tow-boat *W. L. Lord*, used for collecting the whales from the catchers, came in to pick me up. I was sorry to say goodbye to Archie and the boys, but left them in the galley bottling their own supplies of salmon. But the *Lord* was a happy little boat, her skipper Canadian-born Norwegian, Torge Rysberg. It was late, and we anchored for the night in a little creek almost under the branches of forest cedar giants.

On the move at dawn, up through quiet waters in heavily timbered country, a Humpback whale carcass towing astern. A shrill scream came from the direction of a bare, blasted fir. There out on a limb was a Bald eagle as another planed up beside it. They are magnificent birds with the conspicuous white head and neck. The United States did well to adopt them as the national emblem. They are one of the most valuable of the great hawks. They love fish, but cannot catch them as the Ospreys do. During the salmon runs they can readily pick up the stranded dead fish or the sickly weakling that comes to the surface and is better out of the way. But as always, there are ignorant fishermen and hunters, of which Canada has unfortunately her full share. These are ever ready with rifles to destroy any creature that has a right to the same food as man wants to grab for himself. But it has been heartening to find the possible beginnings of a change of attitude; and while civil engineering construction works,

men in the service of secondary industries, have recently been the cause of further destruction of Canada's wild life, yet Professor Ian McTaggart Cowan of the University of British Columbia, a great zoologist and conservationist indeed, has been able to point out to me the nest of a Bald eagle from his office window in Vancouver.

Coal Harbour had been a Canadian Air Force seaplane station, and on the slipway lay the body of one of my old friends, a Sperm whale. Five harpoons were in him; the torture in these waters of the same pathetic order as in the Antarctic. The station had only recently started up after years of a shut-down in whaling, but this was a different proposition from the Antarctic conditions. Outside summer temperatures were high, and the flensing stage was alive with big black flies. Only ice-block refrigeration was available, and the meat was not keeping well. The Black bears would come down from the woods to the beach at night and turn over the stones for crabs, and nosing around, have occasional heated arguments over some particular titbit of whale.

The catchers *Nahmint* and *Sannich* delivered their whales to a mooring buoy in a creek near Winter Harbour, so I went down with the tow boat to wait for them. Quietly we lay at anchor behind Eagle Island, and on deck in my sleeping-bag, contemplating the silent woods as the full moon rose behind the spruce and fir tops, there was real peace. . . . Suddenly from the dark shore line away off behind us, out of a silence you could almost feel, came the cry of a Loon. The Spirit of the Wilderness embodied in the Great Northern diver. That haunting bird voice from the shadows that brings your breathing to a stop. A weird rising flute like single yodel, ending with the prolonged, fading child's cry. It catches your throat with the feeling that it has been sent from the beginnings of creation.

Next day I boarded *Nahmint* which had been a Navy diesel minesweeper, and shot a colour film of the harpooning

of a Humpback and a forty-minute struggle. But my slow-motion section of the film was not to be, for the harpoon-propelling explosive was not smokeless. A white impenetrable wall of smoke blotted out everything as soon as the gun fired. We lay for the next night in Kyuquot Creek, a lonely spot shut in by thick timber. It was very cold; the cold of the great woods that protect the snows from the too eager spring sun that would turn the white blanket into destructive floods. And here, after months of summer, it was still cold.

All the next day again we looked for whales and only at night came up with a Humpback that played around us. It was too dark for photography and he was obviously so glad with life that I did wish he would not be harmed. In the fading light, a shot that missed sent him off, and the great ball of the moon rose with a knowing smile over the darkening waters. A hearty supper, and we lay wallowing in the swell while I tried to steady myself in my sleeping-bag on top of the wheelhouse. In the morning I transferred to *Sannich*. She was a very old boat, built in 1904 as a catcher of 500 h.p. in steam. The crew said she was ready to fall to pieces but she could still do nine knots, and big sunfish just stayed and rocked in our wash as we passed them. We got one Fin whale that day out of a school of six.

Another brief visit to the whaling station for a final discussion with the Federal Department of Fisheries biologist, Gordon Pike, then it had to be a return to Vancouver. B.C. Packers supply tender *Kimsquit* was going back towing a refrigerating scow of frozen meat, and to collect fish from the packing station at Kildonan on the way. So out to sea to make the station by sunset next day. A night's rest, then all the following daylight hours and into the next night loading brick-hard tuna and salmon, while the British Columbian rain poured and soaked through every stitch of clothing. Back then to Vancouver, the scow with her hurricane lantern foaming along a cable length astern.

September now and the tension in Europe growing. Count Bernadotte murdered in Palestine. Canada standing by to start again the Air Force Training Scheme in co-operation with the United Kingdom. How many more dictatorships were going to resort to war as face-saving, rather than admit their ideologies were a failure? But in the whaling research at home, enough equipment had at last been collected to allow progress to be made.

I had still work to do up-country, and learning to handle the whims of the little Cessna float planes used in bush flying was a pleasant diversion from a spell of routine writing work. Then in the midst of this I met the fur-trappers from the north, and what a pathetic story they did have to tell. Of the misery of suffering the fur-bearing animals went through in a trade that pandered largely to the vanity of fashion. All that Grey Owl had told of his part of the interior was the same for British Columbia. But it was heartening to find a man like Charlie Olds, a locomotive engineer and spare-time trapper who had taken land to run a reserve for the protection instead of the hurting of the animals. Then he told me how he had come on the beaver caught by the foreleg in one of his traps. He had hit it a blow over the head, when it struggled to its feet and stood up clutching the trap, swaying on those still unsmashed hind legs as it looked steadily back at him.—Truly is it said a man is responsible to nobody but his own conscience. That courageous little soul, looking death in the face, saved the lives of so many of his fellows. For Olds has influenced many trappers since to come in and help protect the wilderness.

All I had time to do about it now was to see the Hudson's Bay Company men in the fur trade at their headquarters in Winnipeg on my way back east. But it looked like the start of another big job ahead—a job that was to take me across Canada again three years later with the trappers on the snowshoe trails: to see the wild things that sobbed for days

and nights on end with mangled legs. When I was to talk—yes, also through tears—to the trapped Marten, one of the loveliest animals of the woods, symbolic of all the creatures, too badly injured to live on—talk to him in the hope that he might understand that we would surely meet him again and try to make up for this thing we had done.

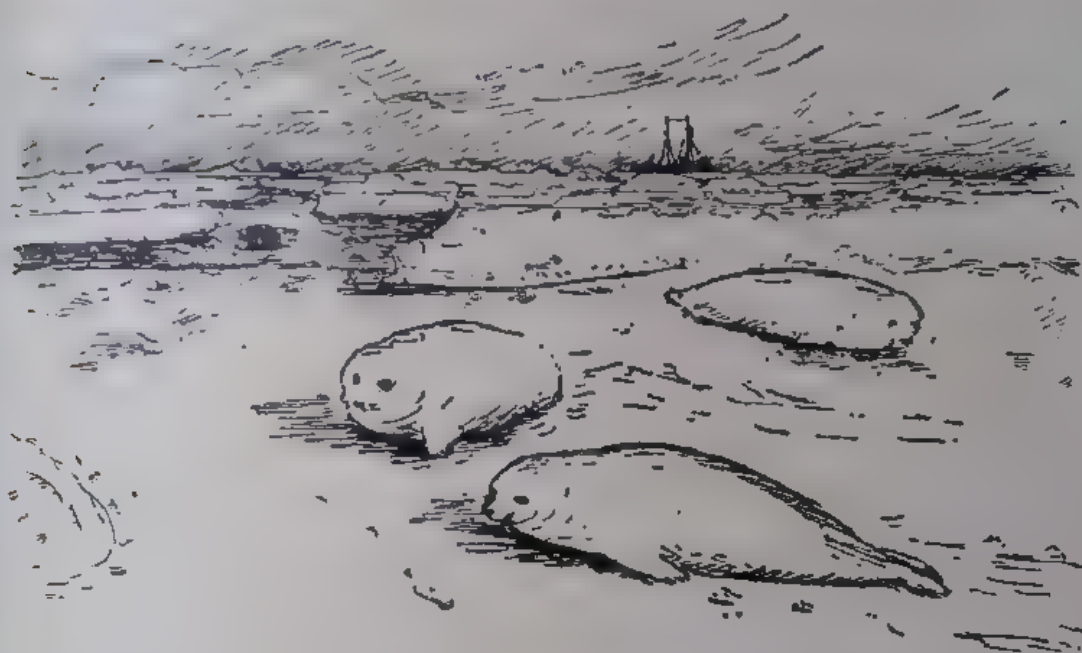
All the while, in the human cities, New York, Montreal, London, Paris, women whose rank in society was no indication of their kindliness, clad themselves in their mink coats and knelt in their churches to take what was called communion; giving no thought to those creatures that had been tortured unto death that their pelts, given by the Creator to keep those small bodies warm in the great wilderness, might be torn from them for display on these living human altars of vanity.

Then in summer days that followed the snows, I was to rest beside a beaver dam late one night when a big old beaver came close, to stand gazing at me steadily, looking right into every corner of my thoughts, into everything I had ever done, when I knew I could hide nothing from him.



Chapter Eighteen

The Waters of the White Seal



Wheel down, wheel down to southward! Oh, Gooverooska go!
And tell the Deep-Sea Viceroys the story of our woe;
Ere, empty as the shark's egg the tempest flings ashore,
The Beaches of Lukannon shall know their sons no more!

RUDYARD KIPLING: *The Jungle Book*

The Waters of the White Seal

ONCE more a Greyhound bus headed up the Fraser River from Vancouver, climbing the timbered slopes, the start of the long trek back to the Atlantic coast.

In Winnipeg, executives of the Hudson's Bay Company were interested to hear the story of the whales. The discussion of the cruelties involved led of course to the situation in the fur-trapping. It was the same story, little if any thought had been given in the past to the suffering inflicted; nor any thought as to whether Canada was doing the right thing in allowing the very precious predatory fur-bearers to be destroyed instead of strictly preserved. The creatures that protected the forests from the rodents and the spawning beds in the rivers from predatory fish. But it was good to know that conservation of the Beaver was spreading. The Hudson's Bay Company had done elsewhere what Grey Owl had fought for in Saskatchewan.

I got back to Toronto just as the British Minister of Agriculture and Fisheries, Mr. Tom Williams, arrived from England on a visit. At a conference with him at the Royal York Hotel he confirmed that, as I had feared, there was great lack of understanding of the seriousness of the whaling problems by those concerned in the Government in London. Further communications from England revealed that one catcher would carry out electrical-harpoon tests in the Antarctic in the 1948-9 season; and meat inspectors were to accompany the factories. With these bare facts, it was difficult to understand what use meat inspectors were to be. As far as the meat was concerned, a whale with a harpoon in the abdomen that had burst the intestines was

The original Dundee Whaler *Balaena* at the beginning of the present century. (Photograph by kindness of Valentine, Dundee.)



AND OUT ON THE PACIFIC COAST OF CANADA

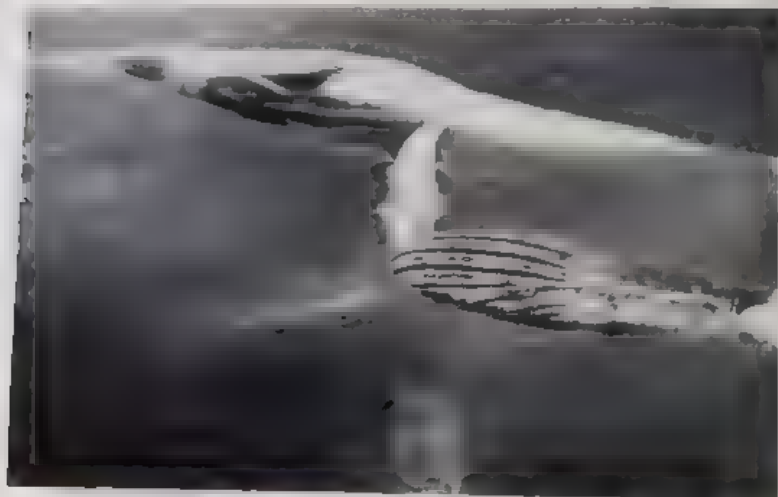


It was not for lack of charm that the bagpipes refused to play. Betty Lou and Marjorie Anne.

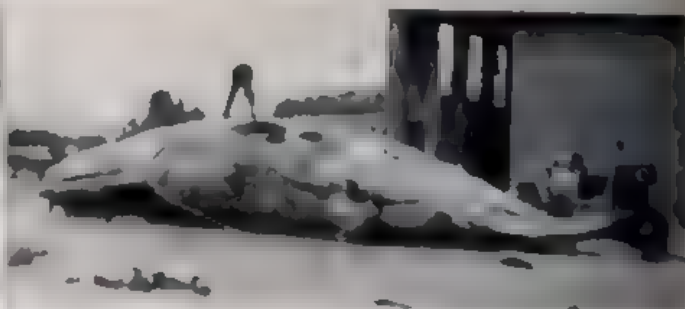
Far from his native Isle of North Uist, Archie takes us into Winter Harbour.



And off this British Columbia coast it was the same weapon. Skipper Oscar Ludvicsen at the harpoon gun on *Sannich*.



Carcasses of a Hump back (foreground) and a Fin.



One of my old friends, a Sperm, lay on the flensing stage

Biologist Gordon Pike shows the structure of Humpback whale baleen.

fit for little else than oil-production and some, not too good, dried meat meal, and the regular whaling inspectors could well decide whether a kill had been humane enough to allow the meat to be fresh frozen. I was looking forward to getting back to Britain now to find out how things really were going, but some more work would have to be done on the Canadian side of the Atlantic first, to leave the financial trail in a satisfactory condition. It was now December 1948, and Newfoundland was apparently in need of medical help. They had been good to us there during the war when we had been in trouble. The least I could do would be to pay them a visit.

'The Scotian' moved out from the Canadian National Central Station in Montreal and down through the timber lands of the Gaspé country. Halifax—and there was John Hodgkinson, who as commander of *Morden* had picked us off the Atlantic that October night in 1942. Now he was Captain of the fast motor vessel *Wellington Kent*, and once again I was going with him, to St. John's in Newfoundland. A two days trip, when the Atlantic seemed to say: 'Here they are again' and dished up a sou'easter that rivalled the conditions of our dash westwards six years before. We yarned over old times, while the seas forced the passage of even the tightened porthole over my settee bunk, and I spent the nights picking myself off the deck and ringing out the blankets. But it was a treat to see John again.

The end of the year brought me to a base at Twillingate Hospital in Notre Dame Bay up in the north-east sector of this island that guarded the Atlantic outlet of the St. Lawrence. The hospital an institution of 130 beds, serving 3,000 square miles and 40,000 people was superintended by Dr. John Olds a graduate of Johns Hopkins and a more than proved expert surgeon, and specialist in anything that went wrong with the human body or mind. Known the length and breadth of Newfoundland and far beyond, he

Twillingate into a haven for all, and his home presided over by his wife Betty, was an ever-open door for everyone. John was a keen conservationist and had some sad stories to tell of this land where the human inhabitants in the past had, just as in other countries, been sadly destructive of their country's wild life and general resources. A land where caribou had been shot from railway trains and cow moose had been killed just to get milk for a fisherman's tea. But now possible confederation with Canada was the topic of conversation everywhere.

Through the winter months I was privileged to help John in his work. In summer the patients had come in their small boats; but when winter froze the sea inlets, pony sledges and dog teams, and sometimes aircraft, took over. When we ourselves went out to urgent calls, it was by whatever conveyance was possible. At night when the day's operations, we hoped, were over, John's sitting-room was the scene of many a discussion, from surgical technique and the reason city specialists were so often unable to cope with conditions in the wilds; to the effect of sun spots on climate, the anatomy of seals, and the psychology of Newfoundlanders who preferred to eat dry or salt fish rather than the fresh variety which swam at their very front doors. Often it was into the early hours of the morning while the temperature outside went down to 20° F. below zero. Then if we had not already been called up to a case in the hospital in the before breakfast hours, the sledge dogs outside made sure we didn't sleep in, by the most blood-curdling noises of battle. But they rarely drew blood, and when you bawled them out they would stop with tails wagging and the largest grins on their faces.

Here I was in North America trying to combine medical work and lecturing in a quest to see what could be done to help on our charter for the whales. Now from John and the fishermen around Twillingate I learned how the victims of the Newfoundland Harp and Hood seal fishery were in

need in their helplessness against cruelty and exploitation. John had himself been two or three seasons to the ice-fields with the sealing fleets and knew the situation well. Each spring the Harp seals migrating from the far north, congregated on the ice round the Newfoundland coast to give birth to their woolly, white-coated babies, defenceless against the depredations of men who killed them for their fat and skins.

As the winter storms howled round the hospital we discussed plans, and always as in the whaling the question arose :—Why in the last hundred years had the cruelties not been considered?

* * * * *

The beginning of March 1949. Twenty-five ships from Newfoundland, Norway, and Canada, with some United States capital involved, were going to the sealing in the ice-fields that drifted in a 100-mile-wide belt down from Greenland seas to the Atlantic coast of Newfoundland and into the Gulf of St. Lawrence. With the co-operation of the Conception Bay Sealing Company of Newfoundland I got one of their vessels fitted to carry the equipment necessary as emergency medical ship, as John Olds had done on previous occasions. Taking leave of Twillingate after an all too short winter's work, I spent the next two months in the drifting pack with the seals. At times our little 123-foot wooden vessel *Codroy*, with her crew of forty-three men, lay immovably jammed in a silent world of drifting snow; on other days the pack grinding and battering at her sides in an ocean swell. Three ships were lost. One wooden Newfoundland vessel crushed by heavy inshore rafting pack ice, but from which the crew escaped; but two steel Norwegian ships lost by fire and heavy seas, the crews of both missing, ninety men. Sealing has been a history of tragedy for both seals and men. Apart from loss of ships, crews, out jumping ice pans after seals, have been cut off from their vessels at

times by miles of loose ice, and lost in blizzards, the end was usually not long delayed.

In the everyday medical work, conditions were different from whaling. Other ships of the fleet often could not come for medical help, being frozen fast in the pack and perhaps forty miles away. So we treated their pneumonias, damaged ribs, and exposure cases by radio until the ships could come together.

And the reports had been true, unnecessary cruelty was inflicted on the seals. The baby Harps known as 'Whitecoats' were generally killed quickly by a blow on the head, but occasionally I saw men in a hurry just daze them with a kick and cut the little bodies out of the pelts while they lay on their backs still crying. Then the mothers climbing back on to the ice wondered why little bleeding carcasses could not suck milk from them. Days I spent with ciné and other cameras strapped around me jumping ice pans, and with the ocean swell, not always was footing safe. Many times I subsided into the icy water, when first thought had always to be for the saving of the cameras. Fortunately, only one of my three came to grief. On one occasion, a Harp seal being chased close by was caught between two ice pans coming together in the swell, and burst like a ripe tomato. I was more careful after that. In this work, often miles away from the ship, I found drinking a little raw seals' blood and eating the hearts raw to be sustaining food; it is the Eskimo way.

By 9 April the Whitecoats remaining had taken to the water and our attention was turned to the older seals gathering on the pans prior to the north migration. The ice was getting rotten and the seals difficult to approach, so rifles were brought out, and apparently any man who thought he could shoot was allowed to mutilate these creatures. Some seals died at once, others, shot through the neck or lungs, writhed on the pans until they flopped over the edge into the water to die out of sight. I saw as many as

five seals from one single large ice pan disappear, leaving five trails of blood. Others, crippled, lay in pools of more blood, wondering with those big, soft, brown, liquid eyes what they had done to deserve it. Three hundred thousand seals were destroyed annually off Newfoundland alone. International control was urgent here too.

Whaling and sealing, written and talked about in the past as sagas of heroism and adventure, I had found to be largely sagas of brutality.

The agreed date of Confederation for Newfoundland was now past and she was now Canada's tenth province. I discussed the sealing with representatives of some of the owners and other sealing captains on our return to St. John's harbour with 10,000 pelts on board, and was greatly encouraged by these skippers. More than I expected agreed that something would have to be done to better the industry. The St. John's press and radio came in to help and the film was developed and edited.

Back from the sealing, I had what seemed a desperately short three weeks more at Twillingate before having to return to Montreal. I felt I was leaving so much of real value in life behind as I said goodbye to John and Betty in their gallant little community.

Then in Ottawa, as Mr. Mayhew, the Minister of Fisheries, his deputy, Mr. Bates, and the executive chiefs watched the sealing film, it looked even more tragic to me on the screen than it did when I had been busy with the technicalities of taking it. Canada could be proud of these men of her Fisheries Department. They were quick to realise that the waste and cruelty demanded action, and were already considering an aerial survey of the seal numbers in the herds to be started the next season along with an intensive study of the migratory habits, necessary for adequate international control, particularly in co-operation with Norway and Denmark. It would have to be on somewhat similar lines to that already in operation in whaling, but

avoiding any tendency to dictation by financial interests which so often had shown itself to be the worst enemy of true conservation.

Just as Gordon Pike handled the Pacific whaling research at Coal Harbour, this Atlantic sealing work had already been begun by the Fisheries Department biologist, Dean Fisher, with his base at the Marine Research Station at St. Andrews in New Brunswick. We had our first conference on board *Codroy* in St. John's harbour while our seal pelts were being unloaded. In the following years, Dean was to continue this seal study on the coasts of Labrador and Newfoundland in a most able manner.

* * * * *

It was now June 1949, and in London was held the inaugural meeting of the new International Whaling Commission regulating whaling, as had been provided for at the Whaling Convention in 1946. But the Canadian and United States delegates returned with reports which gave anything but an indication that the consequences of excessive hunting had in any way impressed themselves on the conference. Then from the States I got a request to put the whaling situation before the American Society of Mammalogists at their annual meeting in the Smithsonian Institute in Washington. The whales told their own story in slides and film, and the colour film was shown of the way the Harp and Hood seals died too. It was a meeting representative of all parts of the United States, and I was struck by the numbers of biologists who told me how little they realised what was being done to the world's wildlife in the name of business.

Taking the chance to see the condition of the animals at the Washington Zoological Gardens while the meeting was on, such an outing gave further opportunity for discussion of those wildlife problems. While standing on a sidewalk in one of those informal conferences with Professor Shadle of

the University of Buffalo, I suddenly felt furry paws grab my ankle. On looking down, here was Barbarelle, a baby tiger almost the size of a fox, on a lead with her mistress.—Would she stand still for a photograph?—No, she would do no such thing.—I got a bit short with her.—‘Barbarelle! will you stand still for just one second?’—She upped on her hind legs as I stooped down, got my chin between her paws and gave me one look.—‘You talk to a girl like that!’—But no claws out; then she relented for just that second I managed to get. She was a nice, wee lass.

But news from Britain of the electrical harpoon research was not as happy as it should have been. The reaction to it in some quarters in the whaling industry appeared to be the creation of a rather sullen background. I personally had found no sign of anything like it during the work with the crews in the Antarctic, and those good gunner friends of mine had waved away suggestion of any objection that they knew of. Perhaps it was just my imagination magnifying matters in its impatience at normal human dislike of change. But with this chance of showing consideration for the creatures that made the industry possible, that were killed without any apology from us, suffering as they did in the process, could we not all rise above any personal prejudice and together get rid of their miseries? Was it not a humbling thought that every whale to be slaughtered was a living creature, infinitely superior to ourselves in its mode of living, to whom we had a debt we could never pay?

It was July 1949 now, and agents of trouble boasting for past months that they would tie up shipping on the Great Lakes, migrated to London to bring three thousand dockers to a standstill. Meantime in Canada another kind of visitation arrived as a result of man the trouble-maker upsetting Nature's balance. While bison no longer existed to prevent the growth of trees on the Prairie, humans in the name of the god of wheat had destroyed the vegetation otherwise. And farther east, so much of the forest lands with their

willife had been cleared away. Grasshoppers, now abnormally adapted to the altered food-supply situation, swarmed in teeming locust millions from those Prairie lands down the St. Lawrence. In Montreal, all over the sidewalks and through the traffic they flew and jumped.

Yet overall they did little damage compared with the depredations of the human hordes. Man had his numbers reduced by four thousand by an earthquake in Ecuador. Elsewhere he strove to start more earthquakes of his own. China, an eroded country was becoming more and more barren by the agency of humans who now gave in to the recruiting slogans of a party whose way of life was there too called Communism. At the same time Canada's schemes for more immigrants were mixing with the smoke of still more forest fires and erosion dust-storms. Men were blindly following the locusts, whose little bodies shrivelled and were blown about in the sun and wind in the streets of Montreal.

* * * * *

August saw the United Nations Economic, Scientific and Cultural Organisation meeting, and when asked to attend, I lost no time in crossing into the United States again and heading for Long Island. If the nations could always meet in the atmosphere as it was then at Lake Success, our international problems would give fewer grounds for worry. Invited to speak at the discussion on the 'Effects of Planned Enterprises on the Balance of Nature,' I tried to put the story of the whales and the seals as briefly and clearly as possible, to give the language interpreters a chance. Under the chairmanship of Dr. Ira N. Gabrielson, President of the Wildlife Management Institute in Washington, I was indeed grateful for the kind and sympathetic hearing the whales got. Lake Success—the name itself gives you an uplift.

In Manhattan again after the meeting was over I looked out once more from the top of the Empire State Building

over the skyscrapers, as I had done during a brief wartime visit six years before. The air was fresh up there in the early morning after the sun had come up out of the Atlantic, a little like being on a mountain top, and yonder the Statue of Liberty away at the river entrance. How many men in the history of the world had had to go up into the solitude of the mountains to find liberty, including He who had to return to the city to be crucified? And away there on the bank of the East River a building had been started, to be the permanent headquarters of the United Nations. The site had been a generous gift. But could this ever be as satisfactory as Lake Success? Could a spot not have been obtained where none of the rush and turmoil of a big city could distort and rupture the quiet needed for momentous international decisions? In these days of easy air travel how much better it would have been somewhere in a created national park of its own; any place where Nature herself was in control as hostess, where man would be compelled to be the humble, tolerated guest. Yet here it was to be by a muddy river in a city with notoriously little time for peaceful thought. Could we but leave our ill-bred manners and habits behind, the inhabitants of Penguin City might even have considered extending to us their hospitality. As it was, the United Nations was surely going to pay a heavy price for its free site.

All through that night, the 'Montreal Limited' of the Delaware and Hudson Railroad took me back north to visit an old friend getting new strength in the Sanatorium at St. Agathe in the Laurentian Mountains. It was one of my last nights in Canada. I slept out on a hill under the stars, while the small Canadian woods folk made quiet rustlings around me as they went about their little lives.

Chapter Nineteen

Dawn



Success comes only by carving through a mountain with your
finger nails.

JONATHAN SWIFT

1922

The Canadian Pacific vessel *Heaverlake*, with Captain Bell in command, was going to return me to Europe. As she lay at her berth in Montreal, a little bat, driven to seeking new surroundings by the smoke of the burning timber lands, came in by the porthole to take up quarters in the cupboard of my cabin. He stayed for the trip down the St. Lawrence, but near Belle Isle I absent-mindedly lit my pipe too near him and he fled out toward the land. Just as well, for the British Immigration authorities might have wanted him to return to his native country in any case. Beyond Belle Isle, a solitary iceberg drifted against a backdrop of the Aurora, and my thoughts went back to South Georgia;—and at home, had they forged ahead with the electric harpoon? After the Atlantic crossing there was a call to be made to Antwerp before we could get back to find out, and as we unloaded frozen horse-meat there, I went up-town to see how the people in yet another zoo were faring. The poor Kestrel hawks were in dreadful cramped boxes that went by the name of cages but more in keeping with an Eastern bazaar; and a little Common seal swam round by himself amongst the fallen leaves in his tiny pool. He seemed a lonely soul, and I longed to pick him up and take him to the ship and back where his friends were in the sea. For loneliness in a little seal, just as in a human, can be one of the worst troubles of all.

It was a morning of drizzling rain this mid September as we moved up the Thames and into the Albert Dock.—Now, what had happened about the whales?

Competition in the Antarctic was keener than ever, and

at the last whaling conference it had been agreed that twelve hundred and fifty of the previously protected Humpback whales could be taken—In an industry operating well over two hundred catching vessels in the Antarctic, great care was going to be needed in its remote control from Norway to prevent a figure like this being greatly exceeded. And instead of increasingly strict conservation, and protection of the Blue whale in particular, it looked as though control was giving way before the blustering of those with no thought for the future. Were the particular men at these conferences all too few who had both a knowledge of the fundamentals of conservation and at the same time the courage of their convictions? Only by increasing the number and the individual killing power of the hunting vessels was the international quota of whales being reached; and still this excessively high figure of 16,000 Blue whale units was being allowed. The only helpful factor was that world prices of oils were falling.

As for the electrical harpoon. A catcher had been fitted out in Norway in 1948 by United Whalers, adapting existing harpoons and guns to electrical killing. Apparently there were Norwegian objections to having an independent observer at these early tests and they were not satisfactorily conducted. But United Whalers, in face of all opposition, most of it rather pathetic, were keeping at it, and Sir Vyvyan Board had decided to go down to the Antarctic himself to see the tests done properly. With him would be Mr. Robert Marsden of General Electric's Projects Development Department, who had evolved the new electrical equipment. Meanwhile, Westley Richards & Co. Ltd. of Birmingham were interested at once in the possibilities of a new spigot gun. In this, concentrating at first on delivery of a killing electric current only, to test the German figures of amperage and voltage, a light-weight spear-like harpoon was first made that might be described as a whale hypodermic, trailing just a light conductor cable.

The ultimate aim was to get increased velocity and straighter trajectory of a final operative harpoon with a lighter gun than the existing whaling weapon such as made by the Norwegian Government armament factory at Kongsberg. This was possible with a gun of the spigot type, in which the charge was no longer at the breech but fitted on the end of a spigot tube and fired electrically from breech contact gear. The harpoon itself now carried the combustion chamber, a hollow cylinder fitting over the spigot with its charge—a flying gun barrel of high stress alloy steel fitted with a harpoon head that once more had no explosive in it.

Meanwhile another floating factory was fitted out with whale-meat canning plant, but, with the old harpoon still in use, contamination of the meat went on, and suitable fresh meat had been on very short supply for the last two years.

So we came to the 1949-50 Antarctic season, and as expected, the number of Humpback whales killed was far in excess of the 1250 quota. There were fewer Blue whales than ever, with a slight upward trend in size of those taken that could in no way mitigate the warnings that breeding was closing down and extermination on the way. Sir Vyvyan, with representatives of the equipment manufacturers, carried out the Antarctic tests through the fair and foul weather involved. The early prototype spigot gun was used; and a series also with the existing heavy Kongsberg gun using a modification of the existing harpoons, a detachable shaft being withdrawn from the now electrically alive harpoon head as it became embedded in the whale, to try and avoid short-circuiting of current direct back into the sea.

These tests included the full scale investigations to find out the practical 'electrical characteristics' of this new method. It was important to find the critical buoyancies of the harpooned whales. Too low a current would allow respiration in the animal to continue, and the whole body sink from the filling of the lungs by sea water. At the same

time too high a current would burn the tissues, and carbon from the charring set up high enough resistance to cause the current to drop below effective killing level. All the required information was obtained, although spasm of the whale muscle induced by the electric current buckled and twisted the light test harpoons. The German electrical figures were not found to be of much help and it had been a case of working things out again practically from a fresh start.

It was now to be a real problem no matter what gun was used, to get an electrical conductor incorporated in a satisfactory foregoer rope, completely insulated against sea water at a temperature of 28° F. or lower, and then withstand the sudden snatch on the firing of a harpoon with a muzzle velocity if possibly up to 400 feet per second. Fifty different rope layouts by various makers were tried as the weeks and then the months went by. Still the electrical conductors kept parting company with the ropes carrying them. The hundredth trial came, and on it went, the ropes getting heavier and heavier with the spigot harpoon weight going up in consequence.

July 1950 brought the International Whaling Commission meeting at Oslo. Still the 16,000 Blue whale unit figure was left as it was; but Professor Birger Bergersen of Norway at last approached the Blue whale problem by suggesting it would be better to have a limit on each species. A kill of Humpbacks was to be continued, but the catch to be reported to the Norwegian control base from the Antarctic by wireless daily. Throughout the year, and into 1951, the harpoon research tests continued, from the Outer Hebrides of Scotland to the Portuguese island of São Thomé off French Equatorial Africa, with Sir Vyvyan, Robert Marsden, and Harry Rogers the director of Westley Richards in attendance.

The Whaling Commission meeting in July 1951 was at Capetown, when it was proposed to delay the start of the 1951-2 season until 2 January. It would give the whales a

THE PATH THROUGH PENGUIN CITY

...to put on more fat, and also perhaps do a little to ease the pressure on the Blue whales, as they are the first to start on migration away from the Antarctic as winter approaches. There were objections raised to the continued killing of Humpbacks in the Antarctic, but with Australia taking them more and more from shore stations on their migration routes, it looked rather like a proposal on crude business lines and hardly in the spirit of conservation. —You conserve and I'll fish—was an attitude that might lead to an increase everywhere in a destructive human world with growing competition for food supplies, and would have to be watched. The delegates left Capetown with the overall killing quota yet again unaltered.

London saw the 1952 meeting, and by now it was agreed to increase the minimum permissible length of Fin whales captured by factory ships in the Antarctic to 60 feet, but the 55 feet retained in the Northern Hemisphere where they apparently mature at a smaller size. Also the minimum length of sperm whales to be taken by the factory ships was increased from 35 to 38 feet. Although the 16,000 Blue whale units monument was given yet another coat of paint a committee was set up to consider its reduction. Was it the drop in the price of whale oil that had allowed the whalers to have a say at last? The same committee was to investigate the advisability of making the greater part of the Atlantic sector of the Antarctic waters a sanctuary for the whales. It was that area rich in developing krill where the whales, especially the younger ones, might well be left to thrive and grow in peace. Were we at last seeing the dawning of a new dawn and spirit in the Commission meeting? We could only wait and hope.

The vote tally had now reached one hundred and fifty. It went the other way now on the lines of submarine cable laying. There could surely be no defeat for perseverance but still they at what must have been close on rope two hundred the bell rang. The Pirella-General electrified



THE TIGER



THE TIGER

THE TIGER



THE TIGER



Sir Vyvyan Board at the spigot electric harpoon gun on *Setter V*. Photograph taken by Harry Rogers at sea off Aberdeen.



All our hopes were with *Setter V* as she left Southampton this late October day.

patented layered rope was born. One and a quarter inch diameter layered nylon round a central rubber cored conductor, the whole capable of a stretch of approaching fifty per cent under stress and still returning to normal. Another sea trial with the complete harpoon equipment off Norway, and the news went out from London;—there were no further doubts about the new proposition.

But it had become evident that there was still going to be considerable resistance to the new ideas. Change is almost invariably a slow process in much of the human make up and Nature decrees it shall be so throughout her domain, that many blunders may be avoided. Can we say that the meteoric development of the internal combustion engine leading to our chaotic city traffic and the hellish noise of aircraft has been a blessing? With all our lifeline supplies on land and sea and our agricultural production itself now so dependent on fuel supplies from other lands? It was quite understandable for those versed in the old tried ways, to resist something that was going to so change whale gunning: the straight trajectory of the high velocity weapon, and the electrical firing, old as it was in naval gun practice. But could the men in the industry be callous enough to want the torturing of the whales to continue as the result of the old status being maintained? Certainly not: looking back on my days with those gunners in the Antarctic, I was convinced they would be glad indeed that they were at last to see the end of the era of vicious cruelty in whaling.

Due to increased production of vegetable oils in tropical areas, the 1952-3 Antarctic whaling season opened with the market price of whale oil down to £76 sterling per ton, where previous years had seen it up to £110. Also, considerable quantities of the last season's oil were still unsold. So three of Norway's factory ships stayed out of it: although there was now extended use of helicopters following the preliminary trial of them by pilot Alan Bristow flying from a factory ship in 1950-51; a development of United Whalers'

pioneering with amphibian fixed wing aircraft back in our 1946-7 whaling season, when they had been handled by John Grierson. United Whalers' catcher *Setter V* carried out a further test of electrical equipment, but again using the Kongsberg gun with the older harpoon modified with the detachable shaft. The latest development of the spigot gun was not then ready for the Antarctic.

But the detachable shaft harpoon was finally found unsatisfactory. The shaft withdrawal left too large a wound hole in the whale blubber, when blood and sea water filling it caused continual short-circuits to the sea.

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Meanwhile the Newfoundland seals had not been neglected. The aerial survey work had gone on with the close biological study, and the tag marking of the young Whitecoats for migratory checks. There had been a preliminary conference of the Canadian Federal Department of Fisheries, with the sealing interests in St. John's.

In the spring of 1952 there were reports of foreign vessels poaching the fast disappearing walrus in Greenland territory. Resulting bitterness was eased by Nature herself stepping in, by the loss of vessels which may have been involved, apparently by storm at sea. Shortly after, following a spring catch of 400,000 seals off Newfoundland and Labrador, Canada arranged an informal meeting with the Norwegians and Danes at the fisheries research station at St. Andrews in New Brunswick. France was also in attendance, although she had had only one vessel at the sealing. A follow-up meeting came later in the year at Copenhagen. Although the surveys had revealed more seals than expected, it was recognised that the shooting of the adults would have to be the first thing controlled, following the fixing of opening and closing dates for the season. It was also felt that the sealing might continue by agreement, without a cumbersome international commission. All of it refreshing news.

Meanwhile as with the whaling, the price of seal oil was dropping and sealing activities tending for a time to decline.

This spring of 1954 has seen the overall programme of biological study still pushing steadily on; the Federal Fisheries Authorities with typical thoroughness making certain of their ground as they advance toward the goal of the formal international agreement that will surely establish a charter for the Harp and Hood seals as another example of true conservation.



The year 1953 started off with a bit more discouragement in the electrical harpoon progress. Expected help to speed up manufacture of the newly developed spigot gun did not materialise. But Sir Vyvyan, still undaunted, and sustained in his turn by just nobody outside his existing team, gave Westley Richards and Co. the green light to go ahead on their own with what would surely be the final prototype weapon. Our shirts were now on that spigot gun as the means of getting the General Electric Company's electricity from the catcher to the whales.

By mid-June 1953 the gun was ready, and on test, went into action on catcher *Setter V* off the Norwegian coast in July, handled by her Norwegian gunner. With current varying from 30 to 70 amperes at 250 volts A.C. at 50 cycles, twelve Baleen whales were quickly killed with no difficulty, some harpooned with the catcher at full speed. In August, *Setter V* was at sea once more, and in a week of bad stormy and foggy weather off Norway's more northerly coast, the only whale seen was taken, a Fin, to give the largest oil yield of any whale yet captured in these waters. Back in port, the gun was returned to Birmingham for final check. One problem required further investigation. It had been found that the satisfactory killing current for Baleen whales did not always kill Sperm whales as efficiently, until there was an alteration made, perhaps such as a reduction

in the generator cycles. Was it the different chemical composition and structure of fat and muscle in the two species? We don't yet know.

October, and the fleets were preparing to leave for another Antarctic season.

Beside a small reservoir feeding a canal at Castle Bromwich in the city of Birmingham area the gun was mounted on a concrete base and put through its final paces. As the blast from the explosion of the tubular cordite kicked up dirt and blew the fallen leaves around on this autumn day, the harpoon velocity was measured electrically, while two swans from a safe distance solemnly watched the career of this queer man made projectile trailing nylon rope behind it over the waters of their previously quiet domain. An old leaking punt was used to recover the harpoon from the bed of the reservoir after each firing. I stood precariously on the roof of the cab of the gunmaker's truck photographing the show with the same camera that had recorded the ordeal of the whales in the Antarctic seven years before. Fumes from nearby factories drifted over to us. How different it was from the clear pure air of the pack ice. And for some moments I was back in my cabin on *Harvester*, when sleep would not come and the foolscap was scribbled over, recording those first thoughts of what would have to be done.

At the June 1953 meeting of the International Whaling Commission, again in London, it was resolved that in the 1953-4 season in the Antarctic the Baleen whale killing would again start at the beginning of January. Humpbacks would once more be taken but only on the first to fourth February inclusive in each year. Such killing days were fixed as it had at last been realised that it was impracticable to decree that a definite small number of these whales could be taken. There was still no protection for the Blue whales other than that they could not be hunted before the 16 January now in any year. A proposal by Ambassador Birger Bergersen of Norway that the Weddell Sea sector should

be made a real sanctuary for the Blue whales was not accepted.

The Blue whale unit figure remained an overall one for the total Baleen whale catch, but at last reduced. From 16,000 to 15,500; a concession to the conservation minded of a rather pitiful 500 units. Perhaps 30,300 whales would be the season's destruction instead of 31,300. Someone in one of the many fleets at work would possibly see more whales than anyone else and declare that they were as plentiful as ever. The industry's short term economists would then surely ask for proof that this was incorrect, while discounting the reports of their own gunners and the greater and greater distances over which the hunting vessels have to sweep to find the whales. Ease of spotting with helicopters may well give a fatally wrong impression of numbers. And while we wait for the final cold-blooded mathematical figures that ultimately might be available to prove scientifically the obvious, the situation may well become too late to save. The tragedy of the Northern Hemisphere will then have been repeated within a single century. But undoubtedly a start in the right direction had been made; and there might be more real progress at the next Commission meeting at Tokyo in July 1954.

The name United Whalers was now ended. With rearrangement of share capital, the business reverted to the parent Hector Whaling Limited; but it would be some time before the whaling men would correct their everyday vocabulary and forget the name that had meant so much in the nursing and growth of an ideal.

And now the eyes of the world's whaling were going to be on *Setter V* with her already proven electrical whale stunning equipment, but now mounting this four-inch calibre electrically fired, hydraulic buffered spigot gun. A bit lighter than the older Kongsberg, but with the new 117 pound harpoon, probably the heaviest piece of civilian designed and manufactured artillery ever produced.

The price of whale oil for the 1953-4 season was down further, to £67 10s. per ton. To-day the protein meat products are of increasing value. An average of ten tons of the carcass meat per whale will be utilised for both human and other animal consumption, and with the coming of the day when the explosive harpoon is superseded everywhere by clean decent killing, the oil will be of still less paramount importance.

As *Setter V* cast off from her berth at Southampton this late October day on her long voyage, she was perhaps on a short term killing trip, but which in the end would surely prove a mission of increasing humanity as the word might come to mean it some day. As she moved away from those of us left behind, I could only hope that Brownie, or one of her little family, would meet her in the far South, and recognising her for what she was, tell the Musketeers that we were fighting on.

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To continue the study of their migration habits as originally carried out by the Discovery Organisation, the marking of swimming whales in Antarctic seas was now resumed for a month before the opening of the Baleen whaling season. By small, numbered metal darts fired into the whales by a shoulder gun from the harpoon gun platform of the new fast Norwegian catcher *Enern*: the enterprise financed jointly by Norwegian, British and South African, and Dutch whaling companies.

Seventeen pelagic factory ships went to the Antarctic for this last season, attended by over two hundred catching vessels. Three of the factories, two Norwegian and one Japanese, made use of helicopters for spotting. A British expedition will probably employ helicopters in the 1954-5 season. What the future of these aircraft will ultimately be in whaling we cannot yet say. Their use might allow the number of surface catching vessels to be substantially

numbers nearer; unless hand in hand with fresh discoveries for preserving human life, we controlled man's wild reproduction; bringing our knowledge of genetics to bear in aiming at higher standards instead of those mere numbers. —But was this practical? How many countries would co-operate in any such proposition? The human world with its professions was sick. Nature herself the healing mother was urgently needed, and fortunately we still had many great surgeons and medical men who would never try to do without her as their senior partner.

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Standing in a bus queue in the Strand, I thought of the wastes of the friendly pack ice, and the companionship of the little Dung beetles in the desert. If only man's normal desire could be just to live by getting things to grow in a well cared for Mother Earth, sharing the results with all other creatures, taking care of the trees and birds and animals which help to preserve the soil and give him shelter. When he gets away from that and herds in cities, his mind becomes distorted, poisoned by the reek of the bodies of his own species. He must work for fellow humans both in his own land and in other countries, that they may in return feed him, build a roof over his head, and carry him about from place to place. Yet strikes and bickerings amongst those fellow humans may upset his life at any moment.

So many of those with minds of their own were struggling overseas only to find that young Commonwealth countries were making the same mistakes. Yet we had to face the fact, and it was only genuinely constructive patriotism to do so, that Britain's day as manufacturing workshop of the world was coming to a close, the world having learned to do the tricks itself. Could we honestly say that our industrial age had brought happiness? Were our monstrous smoke begrimed cities monuments of which to be proud? For a return to fullness of life we would have to strive to get

back to a more balanced peasant outlook. A sane balance of towns and country perhaps more like the lands of Scandinavia, in which our flashing neon signs no longer obscured the moon and stars provided to guide us in living again close to the soil. And in what secondary industries we retained, we would have to follow more closely the example set by a country like Switzerland, which, in such as her watch trade, exported such vast amounts of the results of skill per ton of the very small amount of raw material she used. Can we say that we are of any more importance in the universe than the little brown rats in the barn that we are so fond of persecuting, now that they have adapted themselves from the wild to the ways of humans? Yet when these small people breed to excess, then just as humans do they tend to fight if disease has not done the thinning out. Is it not a form of pathetic conceit that so many of us sit back complacently under the belief that the Creator thought such a lot of us that he appeared in our image who are really on a par with unbelievably careless monkeys? Can we say that we lead better and more useful lives than the people of Kipling's Bandar Log?

By the rubbish in our wake, and the noble noise we make,
Be sure, be sure, we're going to do some splendid things.

We sit back and say—All is fine, science will discover the remedy for decreasing food supplies. In breaking Nature's law that we borrow only what we put back we have been guilty of deplorable ingratitude: instead of returning our treated excreta and our dead bodies to the soil from which we came, to fertilise it for future life, we have tried to settle our debt with artificial chemicals. Science responds too by spraying our orchards and crops in gay abandon with these concocted chemicals to kill what we call harmful insects and weeds, while the birds and the bees are killed too, to pave the way for fresh and worse troubles. We have an unreasoning fear of Nature's normal bacteria instead of a more than

justifiable fear of ourselves. We spray our food and the human body itself inside and out with the same chemical horrors, and the latest antibiotics, wonder why our half dead entrails cannot get rid of the poisons of this daily misuse, then talk of resulting disease as something that needs vast moneys and our fellow animals to be expended in laboratory research to find out the cause of it. Yet unlike the case of our little brown rats, our new diseases no longer seem to affect our rate of reproduction. Strangely, man seems to be one of the very few creatures whose rate of breeding is in inverse ratio to his food supply.

'Sleeping berths upstairs, sir.'—A witty bus conductor brought me back to where I was. Yes, I would get on this No. 11 to Victoria and a District train to Kew and see how fine this once fair land might all be again one day.

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I sat with my back against a willow by the lake, but great airliners roaring overhead were something new and disturbing to this one time sanctuary in London. Did our so called progress mean that everything of value had to be destroyed? The geese, however, brought some peace as they attended to the toilet of their feathers; and a coot tugged up the pond weed. We have only to look at the office workers who relax in London and New York parks in the summer during their all-too-short breaks, to realise how so many people everywhere are really crying out for escape although they may only subconsciously be aware of it. And in so many of us kindred sympathy for the other creatures is never really far away. It is just suppressed by the exploiting few, and the easier way of not thinking. Whenever the question of the plight of the whales and other creatures crops up, I meet the utmost kindness in every land I visit, and the same at home in Britain.

But it is pleasant away from the few who ask: 'But who pays you to do all this for the whaling? Why don't you settle

down and make some money?"—So many things in this world crying out to be done have had to wait for financial bargaining, and sunk out of sight in the morass of indifference in the process. How constantly do consuming ambitions for worldly prizes blind people to the really worth-while things. I know my sphere is just to fight on; the finances will surely be arranged somehow by the powers who decided the job had to be done. I am told I am quite mad: 'Don't ever do anything sane, Jock, please. We would never recognise you and we couldn't bear it.' Spoken in jest, but comforting just the same. What the whales and seals would think is what matters, and I think I would rather go mad my own way than the way the others would prefer. It was Kevin Mitchell who put it that: 'To be on earth involves no struggle at all for those who have broken free in their personal life from the bondage of civilisation, but such are comparatively few, and the slaves of the vast corporate machine to which so many belong regard them as queer if not cracked. So far have the many lost touch with the inner realities of living.'

It is the experts and the specialists who may well do much to drag us down by neglect of their wider obligations. We have the experts in engineering, in medicine, the experts in agriculture, law, divinity, in nuclear physics; in all the spheres. And even specialised specialists in subsections of those spheres. All successful in making money, or at least a living. But the co-ordination of the whole, essential for our survival, is attempted by parliamentary bodies, for which education, breadth of outlook, and real knowledge are not always considered as important as being able to talk. So many of our economists are without the fundamental knowledge of biology essential to enable them to fit man into his proper sphere in the ecology of the world.

Selfishness, that fearful word that is the root cause of the downhill journey of the human race. Man will not be saved by welfare schemes for himself alone, which drive him only

attention. Yet in this year 1954 we were still seeing in Britain examples of the destruction of some of our grandest trees, the result of a combined lack of biological knowledge and congested human thought. But the outcry against such blunders indicates an awakening in us of a realisation of our responsibilities. True silviculture could lead the human animal gradually back in the direction where he might stumble on to the path toward regained sanity, provided sound ecology was never allowed again to be supplanted by thoughtlessness and the economic expediency of quick returns. If we were to survive, agriculture would have to co-operate and throw all its forces into the battle against the greedy destructive tentacles of the cities. It would have to be a combined operation with far-seeing kindly men the commanders in the field.

And when again we consider the sea, the big business that had exploited the whales, and had ignored the suffering involved, was the product just as much of the rural as of the urban mentality. The rural minds have been perhaps the greater sinners, just as in the case of those who persecuted the Harp seals, for they had a greater chance than the men of the city to know better. In the destruction of our natural resources the world over, with the attendant cruelty to the wildlife, the trees and the soil, the same holds good. The city business man, and the countryman willing to sell the heritage with which he is in personal contact, are together to blame. But perhaps the day was coming quite soon, when we would take as great care of our baby whales as some of us were at last showing toward our baby trees.

But even as Kew was being cared for, other forces were at work. Old River Thames flowed past with waters man-soiled. Yet Thames was almost pure compared with the pollution of other rivers of our country. Pollution by the chemical trade and sewage wastes; the foul excreta of man in his industrial age. An age that had brought occasional small pockets of happiness, and so much general misery. Our

domestic cat, still as in the wild disdainfully independent of us, tries to bury his excreta away from others. Our domestic dog has copied us, fawns and fouls the path just as we do.

Not so far from the trees of Kew, I passed once more through the bombed areas around St. Paul's. No longer the flames and acrid smoke; but the starlings were still there, worthier citizens than we were. And Nature was showing what she could do to obliterate the evils of our civilisation if we gave her the slightest chance. Here, in twelve years, with no help at all from man since the bombs were released, what had been living earth, suffocated below office buildings and pavements, was now acres of flower garden, with the seeds of the rosebay floating on gentle breeze to fresh missions of mercy.

May we ever keep this area beside St. Paul's safe from fresh degradation at our hands, that it may stand as a cherished demonstration of what a garden of happiness Britain and the world can again become, when we realise there are high ideals worth working hard, long, endless hours for; higher than the earning of mere wages and material wealth from the type of industry and business opportunism that still rules, as it ruled in more than one spot before the falling of the bombs.

We must keep ever onwards and as Edward Wilson of the Antarctic said: 'Let the longing to suffer in ever so small a way take the place of a longing to rest. . . . The only things worth being disappointed in or worrying about are ourselves, not in externals.' How true that has proved. How often have I felt disappointed, and thought adversely about someone, and they have almost at once turned round and done me a good turn, making me feel like a sick amoeba. Move on we must, for it is not only the whales that matter, but our attitude to the whole of Creation. As Barrie, our Lord Rector at St. Andrews University in Scotland, cried to us as students: 'Fight on—You— . . . till the whistle blows.'

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 One day as I stood in the offices of the National Broad-
 casting Corporation in New York, I read these few lines as
 they hung on a bulletin board on the wall. I dedicate them
 to you, and you have taken the trouble by reading this
 book to help the whales and the seals and all the other
 creatures who live out there in the end we shall not fail them.

MY FRIEND

"I love you not only for what you are, but for what I am when I am with you."

but for what you are making of me.

... for the part of me that you bring out

[illegible]

I thank you for turning your ear to the discords in me and for attempting to make me free by worst of all listening.

I love you because you are helping me to make of the ruins of my life not a tavern, but a temple, and of the days of my every day, not a reproach but a song.

But you, ~~because~~ you have done more than any creed
could have done to make me good, and more than any fate
could have done to make me happy.

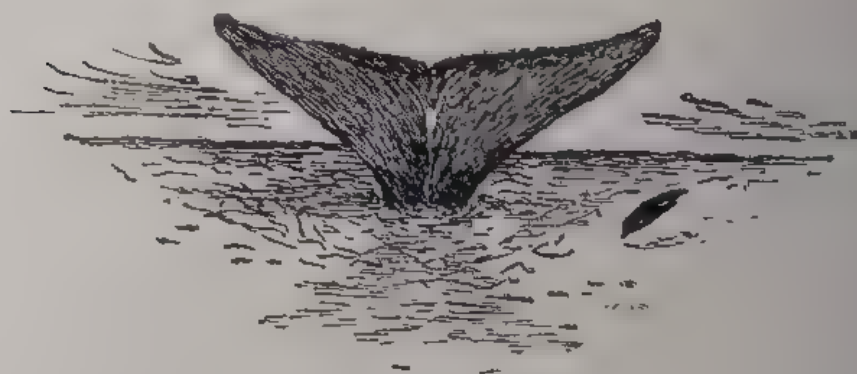
You have done it without a touch, without a word, and so I see, you have done it by just being yourself. I think that is what being a friend means after all.



"I will not rest quiet on in a whale's poor, appointed brain
until I have been struck by the explosive harpoon; and as
the worms and worms his time has come and he cannot

escape? As he hopes desperately in his whale way for the agony to end, do his thoughts go back to the happy days when he swam with his mother? Does he not speak for the whole animal kingdom including man, when his being, cared for by the Creator through it all, sends out the message again to the world: 'Forgive them, for they know not . . .'?

And if I fail in my promises, I will deserve to go the quickest way my conscience can take me to my own particular hell. Eternally before my eyes, a Whale, still majestic and dignified in his agony, swimming through the seas of time with that everlasting trail of blood in his wake. And by his side swimming faithful to the last, one of the little People of Penguin City.



Glossary

ABORIGINES: From the Latin *ab origine* (from original time) and as in Australia taken as the inhabitants present in an area for as long as our history of that area records. But in International Whaling regulations it would appear to be taken as those people recognised as having a permanent home in a particular place prior to the setting up of internationally regulated whaling operations.

AHENT: behind (Scots).

AIR-SACS: Thin, membranous fluctuating air spaces rather like tough soap bubbles in the thorax, abdomen and bones such as the humerus, in birds, and communicating with the bronchi of the lungs. They increase the content of air in the body, necessary where metabolism is at a very high rate in flying or where there is prolonged active immersion in water such as with our penguins. These sacs enable a double or two-way intake of air to the lungs, activated by their connection to the ribs in the motions of flying. They also act as internal perspiration chambers regulating body temperature, there being no sweat glands as in mammals.

BATCHING: In the jute industry: the process of softening and lubricating the fibres of the raw jute as it arrives from India, to enable it to pass more freely through the carding, drawing, and spinning processes. This was by preliminary treatment with an emulsion of water, whale oil and soap. Prior to the introduction of jute fibre in 1820 Dundee was a whaling port and engaged in flax processing. The substitution of gas for animal oils in lighting brought a great decline in whaling, but with the discovery that whale oil enabled the existing flax machinery to handle the jute, the whaling fleet recovered to become the most modern in the world only to co-operate with others in bringing about its own ruin by destruction of the Northern Hemisphere whale stocks.

BONNIE: The Great Skua of the Northern Hemisphere. Term in use particularly in Shetland.

BOTTLENOSE WHALE: One of the commonest of the British cetaceans, growing to about thirty feet in length. Although feeding on cuttlefish, the teeth are generally concealed in the gum. Development of skull crests with overlying fat give a very prominent forehead appearance.

BRASH ICE: Small ice debris from the break-up or grinding together of bergs or large floes. Seen typically round the windward edge of close pack as a result of rough weather.

CHINSTRAP PENGUINS (*Pygoscelis antarctica*): In the past have been more often known as Ringed penguins, but to-day when there is so much marking of birds by putting rings or bands on their legs, the older term leads to confusion. Also the term Chinstrap is the most descriptive of various names which have been given to this species.

COPPODS: Tiny crustaceans most of them less than an eighth of an inch in length, which form a great bulk of the zooplankton section of ocean life, and are the main food of such as our herring. In myriads they can give a distinct coloration to the sea similar to that produced by the shrimp-like krill, but often identified at a distance, as feeding birds are not attracted to them as to the larger krill.

DRIFT ICE: Open scattered pack where the water area is usually very much greater than that of ice. Floes are smaller than in pack as a rule and vessels can often go full speed through it.

DUNG BEETLE (*Scarabaeus sacer*): Found round the Mediterranean. It lays its eggs in a small piece of dung which it then rolls around in the sand to a compact ball and desposits in a hole in the ground. It will apparently also lay in the body of a dead companion, which may have caused the ancient Egyptians to take it as the symbol of resurrection or life coming from death, and so the model for their sacred Scarabs.

DYKE. Wall (Scots). Dry stane dykes are walls such as round low-land fields and in hill country, about four feet high and generally

of hard durable stones such as whin, fitted together to stand without mortar.

FLOE ICE: Pieces of ice freely afloat. Generally taken as those greater than six feet across, and may be the size of a football field. Pieces less than six feet diameter come into the category of brash.

GALASSA (or Gvassa): The large shallow draft native cargo boat about sixty feet long and fifteen foot beam used on the Nile and canals of Egypt. They are of barge-like construction with lorry upturned stems to prevent them burying their noses in high banks into which they sometimes run. Beautiful lateen sails are carried from very long delicately curving yards.

GRAX (or graks): The rendering of the parts of a whale carcass for extraction of oil is done in large digesters, each batch treated for a varying number of hours by high pressure steam, the blubber handled separately from meat and from bone. The masses break down and go partly into solution, and with the removal of oil, the residue is a mixture of what is called glue-water with suspended fibres and other solids called *grax*. This *grax* was removed from the glue-water by vibrating screens, and further oil recovered from the glue-water by centrifugal separators; but the final residual glue-water-grax, commonly just called *grax*, was on some factory ships ejected overboard with a considerable amount of oil still in it. In recent more modern methods this mixed residue has been further treated in presses and by further centrifugalising, to recover more oil, and the true *grax* retained and dried as a valuable commercial feed concentrate.

GREY OWL: Part North American Indian of a Scottish father. His Indian wife Anahareo influenced him to give up fur trapping and devote himself to saving the beaver and other wildlife from destruction. Only after his death when few were available to defend him, did certain people raise the question of him being an impostor. His books, *Pilgrims of the Wild* and others, gave delight to millions.

GROWLER ICE: Ice floating almost awash. May be the remains of a melting berg or pieces broken off larger masses. The term may have been taken from the fact that growlers can be a menace

to small ships as they are difficult to see at times in anything but a calm sea.

- ***ICE BARRIER**: This term used in the past in polar exploration, such as the famous 'Ross barrier', has now been officially discontinued.

ICEBERG (or **berg**): Ice masses calved from the seaward front of a glacier or ice shelf. Generally taken as blocks protruding more than fifteen feet above the water. Smaller masses intermediate between bergs and growler ice are known as 'bergy bits'.

ICE BLINK: The light reflection of pack ice and occasionally bergs, on overcast sky or haze. By contrast the dark reflection of open water on cloud is known as 'water sky'.

- ***ICE FRONT**: The floating or partially floating seaward-facing cliffs of an ice shelf. It would appear that although not officially stated, that the sea cliffs of a glacier would be a glacier front.

- ***ICE SHELF**: This now replaces the term 'Ice barrier' and is given to a mass of land ice, or land ice afloat but still attached to its land mass. Such has been formed by accumulation of snow layers which have not been pressed to the consistency of glacier ice; although such an ice shelf may be subjected to pressure from glaciers behind it, as in the case of the Ross Ice shelf. (This new term should not be confused with the term 'Shelf ice' still in use meantime to describe the ice material itself.)

JERBOA: The jumping rodent of the Old World deserts. Found from Africa through central Asia to Mongolia. Species vary from the size of a house mouse to that of a small common Norwegian brown rat. By day they hide in burrows away from the heat, coming out at dusk to eat seeds and other vegetable matter, maintaining life on an astonishingly dry diet with only the rare chance of drinking water. Our Suez Canal friend with the Latin name *Jaculus aegyptius*, although his friends just call him Jerry, is a small rat size person found in the Middle East and

* The adoption of the terms 'Ice front' and 'Ice shelf' and the discontinuance of 'Ice barrier' has been notified by the Antarctic Place-names Committee of the Research Department of the British Foreign Office as from May 1953, as result of agreement between the United Kingdom, Australian, and New Zealand Governments, the Royal Geographical Society, and taking into account the views of the United States Board on Geographic Names.

North Africa down as far as the southern border of the Sahara. A tawn coloured little chap with a white belly and able to make long jumps at great speed like a tiny kangaroo. His kinsman in America is there known as the Kangaroo rat.

KITE: The Bush kite of Freetown and along to Nigeria is the African Black kite, common from the southern border of the Sahara to Cape Town and is slightly smaller than the Egyptian kite.

LYMPHANGITIS: Inflammation of certain circulatory vessels of the body.

MAN: Considered generally as a member of the mammalian order of the Primates; but it is a problem to know just how to class him and he looks like being a misfit to the end of his career. He is quite unlike the other primates the apes, monkeys, marmosets, lemurs and tarsiers in that he is the only really destructive predator animal known to biology. His diet is almost completely omnivorous, including cannibalistic habits and the eating of carrion as well as vegetable matter. The human embryo shows branchial clefts and a well developed tail, indicating descent from original existence in the sea and a probable subsequent arboreal stage. There is something to be said for those who do not agree with the theory on evolution in this case, for it is difficult to imagine that the so often cruel aggressive largely carnivorous creature man could have come from a common ancestor which also produced the inoffensive chimpanzee and gorilla whose one desire in life is to be left alone in peace.

MITRAL STENOSIS: Constriction of one of the valves of the heart.

MONKEY ISLAND: An open deck structure above the wheelhouse on a ship's main bridge and which carries the master compass and often part of the radar and direction finding equipment.

ORCAS: The name given by the penguins to the Killer whales.

PACK ICE: A concentration of ice floes which may form an extensive level field; or be hummocked due to breaking up by pressure of wind and sea. Open pack is where the floes do not touch, and navigation through it by an ordinary vessel not specially strengthened is comparatively easy. Close pack is where floes are mostly

in contact, but it can be penetrated by ice-breakers and met. by small wooden vessels of sufficient power.

PANCAKE ICE: Thin newly formed ice generally on the surface of deeper water in gentle motion, so that pieces of one to six feet diameter separate and become rounded with raised edges of 'ice porridge' from rubbing together.

PILTOCK: Young saithe or coalfish (Shetland).

PIRIE: The Shetland names have evolved by usage from various sources, mainly Scots and Norwegian, and many are very expressive. The word 'pirie' (*i* as in 'it') means little; but when pronounced 'peerie' (the emphasis on *ee* as in 'see') the word conveys the meaning very little.

PLANKTON (from Gk. *wandering*): The great section of marine life, plant (phytoplankton) and animal (zooplankton) that drifts with the ocean currents. As distinct from *Nekton*, the creatures which have some power to swim against the currents, such as the fishes; and the *Benthos*, the bottom dwellers attached to or crawling on the sea floor, sponges worms and crabs. Plankton forms are mainly microscopical, forming the food of higher forms such as the krill. The group really includes the largest jelly-fish and the drifting Sargassum weed. Most fish have eggs and larvae which drift for a time as plankton forms. The eggs of our sea bed spawning herring hatch out larvae which also join these others.

RAFTING ICE: A milder form of the heavy pressure ice which destroyed Shackleton's ship *Endurance*. Rafting results when pack ice driven by wind or heavy tide is pressed against a large iceberg or resisting land, when floes ride up one on top of another.

RINGBARKING: The bast or phloem immediately beneath the bark of a tree transports sap containing sugar and nitrogenous nourishment downwards from the leaves. If a complete circumferential ring of bark with this phloem is removed, too wide to allow speedy healing over, the roots will starve and die. This very bad practice of deliberate ringbarking was that used in Australia to kill trees not wanted for timber. Forms of carefully controlled

barking are used in horticulture and in such as rubber production; and complete ringbarking is employed to control root turps in the establishment of tea plantations, and for seasoning teak before felling.

REEDRAY One of the willow herb plants. Also known as fireweed, being one of the first growths to appear after a forest fire.

SALLY-PORT Opening in the side of a ship from which a gangway may lead down to the water or dockside, or from which scramble nets can be suspended for speedy transfer of troops.

SCUDDERS: The hind flippers of a sea, that he uses for propulsion in swimming.

VOR: Arm of the sea (Shetland). The equivalent of the Scottish sea loch.

WHINGS: Whine (Shetland): The *g* soft as in 'singe'.

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